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ORIGINAL ARTICLES.

THE PSYCHO-PHYSICAL RELATIONS OF MAN, CONSIDERED FROM THE STANDPOINT OF A PRACTITIONER OF MEDICINE.

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A recent number of the *Literary Digest* states that, "on both sides of the ocean, and in every language that has a periodical literature, psychic phenomena, the occult, the mysterious, are being discussed with an interest, a freedom and a voluminousness heretofore unknown. There is undoubted evidence that this interest is growing and spreading, and that with its widening circle have been developed new sources of information derived from personal experience heretofore untold. A spirit of earnest and impartial investigation seems to be taking the place of the credulity which unquestioningly accepts and the skepticism which arbitrarily condemns without trial. Evidence is being gathered, personal experience generalized, and phenomena which have been called 'supernatural' are being examined with scientific care and accuracy."

The *Medico-Legal Journal* says:

"The marvelous growth of interest in psychological subjects from year to year promise a wide outlook for the future in the ready adaptability of facts, as fast as obtained, to the most absorbing questions of life. A complete revolution in educational methods is pending; the medical and legal aspects of criminals and of the insane are assuming new and strange complications, and great light seems ready to break upon many moral and religious problems. Not a month passes without report of better means of observation and experiment, and the colleges and universities are constantly adding to laboratory apparatus, and to the breadth and extent of their elective courses in experimental psychology. All indications point toward developments in the near future which will be of signal value in their bearing upon science and man."

Expressions of this character and the interest attaching to this subject has led me to re-write a paper prepared by me thirty-six years ago and in which I have found no reason to make any material change. I trust that its statements will not be without practical interest to you.

The veterinarian, in the study and practice of his science finds much of profound interest in his subject. The study of the structure and the functions of the animal framework is full of attraction; so likewise is the application of medicaments in the treatment of its derangements and surgical appliances, and operations when demanded, to restore, so far as possible, the integrity of its configuration and the normal action of its functions.

What distinguishes the practice of our profession in treating the diseases and repairing the injuries of the *genus homo* from that of the veterinarian? From one point of view, his is the most comprehensive science, for while our attention is directed solely to one family of animals, the veterinarian, in this country at least, attends to two species, belonging not only to different families, but to two distinct orders of animals. True, the being who constitutes the subject of our study and practice stands preëminent in the list or classification of animals, as made by zoölogists; and hence we find that he is more complete in structure, with an increase in the number and diversity of his functions, consequently requiring a greater amount of study to understand his anatomy and physiology than is requisite for that of lower animals. When we state that man stands at the head of all created beings we do not mean to affirm that he combines in himself every physical attribute in the perfection that is found in all animals below him. For sight he can not compete with the eagle, for scent with the hound, for swiftness with the deer, for strength or size with the elephant or the horse; yet in man is found the sum of all these qualities in a greater perfection than in any of the lower animals, and though many animals may excel him in the enjoyment of one of these senses, yet in the harmonious development of all the physical powers man stands unrivaled.

Yet I conceive that were we to consider man merely as an animal, our vocation would be but little more important or ennobling than that of the veterinarian. But there is an interest attached to the study of the human body that transcends all that can be presented by any or every other member of the animal creation, important and interesting though they be. What is this element characteristic of man which distinguishes him in so marked a manner from all other animals and gives to the study of *human* anatomy and physiology supreme importance; investigations in regard to the lower order of animals being most interesting and important when they can aid us in understanding man? We know that it is naught else but the mind. This superadded element constitutes the true worth of man and attaches to him immeasurable importance. Hence for centuries has he been the subject of protracted study and investigation, and thanks to the indefatigable labors and researches of our honored ancestors in the medical profession, there has come down to us for our inheritance and appropriation a rich fund of useful knowledge upon everything pertaining to man. May we so live as to show ourselves worthy of such an important trust and be able to say at the close of our earthly career, that we have not allowed the talents committed to us to rust but have like faithful stewards added interest thereto.

Our libraries groan with the weight of accumulated

volumes of classic medical literature; we have the sum total of the lifelong labors of hundreds of able and earnest investigators of the structure and the functions of the human body, and of the application of therapeutics and surgery to the treatment of its ailments and deformities; but does inquiry stop here? Have all the questions in reference to the matters of medical science been settled? By no means, and is it not exceedingly gratifying to know that never before were there such an array of intelligent and active minds at work in investigation and experimentation as at present? Every year, yea, every month teems with discoveries or improvements more or less important as bearing upon disputed points in our science. The field for discovery is yet broad, much, very much is still unknown, and much of time and labor must continue to be expended in these investigations ere our science may be termed a perfect one. For there are many phenomena in the animal economy that yet remain unsolved and such there probably will ever be to challenge the investigation of the student and the philosopher.

It is the *worth* of man, that has led to such laborious study and protracted investigation, both in ancient and modern times, to obtain a knowledge of his constitution and thus be prepared to apply means and employ measures to preserve or restore health to his body and prolong a life so dear to its possessor, and so important to the world. Herein, then, does the medical profession rise above the veterinary. The one has to care for rational beings, the other for animals destitute of reason. The life of the latter bears no comparison to that of the former, and hence the responsibility of treating the diseases of the cow or horse will differ very materially from that imposed upon him who assumes to practice upon man. This fact, then, is the one that elevates our profession, viz: That there is a union of the mind with the body, and he who ignores the mind of man in treating his diseases may well be classed with the veterinarian.

It is not our purpose to enter into a metaphysical discussion of mind and matter, but briefly to notice some of the relations existing between them and the bearing which these known relations have upon the practice of medicine.

Body is animated matter, while mind is incorporated spirit; both are of necessity intimately connected in the phenomenon of life, yet of the nature of this connection we know nothing. But, as an able investigator has said: "As the naturalist knows and applies electro-magnetism in its relations, without comprehending its essence, as the astronomer calculates the movements of the planets without knowing their nature, so can we duly appreciate spirit and matter in their relations to each other as body and mind without being able to explain their nature or their relations."

We have presented to us two distinct theories or doctrines upon this subject, each having their supporters though they are clearly antagonistic. The one denominated the materialist would have us believe that all the operations of the mind are but manifestations of changes that are being produced in the substance of the brain;[1] thus reducing man to a mere machine the movements of which depend upon its *material* construction. With this view of the subject we see that man's mental development is to be attained only by those things which tend to develop his physical system. He has no power of self-government or direction but must act in obedience to the material changes which his body is undergoing.

The other doctrine called the spiritualist, teaches that although the mind has a connection with the body it does not depend upon corporeal conditions for its *operations;* though its *manifestations* may be interfered with by the defects of the body, still its existence and its operations are always independent of any changes in the physical system. And, also, that it gives to man complete power of self-government and culture, and, contrary to the previous doctrine holds him responsible for all his acts. This doctrine carried still farther would teach us that all mental diseases are not perversions of the mind, which remains perfectly sound, but merely derangements of the bodily instrument. We recognize important truths presented by both of these theories and yet we can not but observe that both are opposed to facts of which we are daily cognizant in our own experience and observation. To notice first the materialist's doctrine, we know that there is an intimate relation existing between the mind and body, that physical changes do affect the psychical conditions; yet we can not go so far as to say, as the alienist, that the mind's manifestations are nothing but the evidence of molecular changes taking place in the brain; our own consciousness appears to disprove it. Neither can we fully adopt the spiritualist view, for while we steadfastly believe in the distinct existence of the mind and its power over the conduct of man we must deny the assertion that its manifestations are not influenced by physical changes, for we are made aware from our own individual experience as well as from the testimony of others, that the mental operations are influenced by differing states of the physical system. We every day witness phenomena to prove this assertion, e. g., a little alcohol or opium in the blood proceeding to the brain quickens the intellectual faculties and exalts the passions, then suspends the controlling power of the will and finally extinguishes for a time all mental activity; that the deficient elimination of the constituents of the bile from the circulatory fluids tends to weaken the intellectual powers, and to induce depression of spirits even exciting the desire of self-destruction; also the perverted reasoning of the delirious from fever and the melancholic pictures drawn by the hypochondriac. Nor can we doubt, if we examine the subject attentively, that the development of the mind and its subsequent improvement, depends somewhat upon the healthful activity of the corporeal organism. Finally, therefore, we are led to embrace a portion of each doctrine, while at the same time we must reject other parts of both. We believe that the mind possesses an independent existence, but that its operations are modified by corporeal conditions. That as it possesses an influence over the physical system and modifies its functions so in turn does the condition of the body affect the psychical states. In fact how many affections of the intellect, of the temper, or of the passions are clearly traceable to a perverted condition of some part of the bodily system. Our very familiarity with this class of phenomena has been an obstacle to our deeper scrutiny into its nature. Much has been written upon this subject

[1] Alienist definition of mind: "The mind is simply the functional activity of the physical elements of the brain—a product of brain energy—that has no tangible independent existence."

without elucidating any new truths, and consequently our knowledge upon the points in question remains very limited. We have an abundance of theories offered to explain the nature of the mind, and the relation that it sustains to the body, but these are satisfactory only to the few supporters which each particular doctrine has. The subject is of grave importance and involves the most solemn issues of human life and yet we probably will ever remain ignorant of the great facts connected with the spiritual essence of the mind and the true nature of its connection with the material essence of the body. In the language of the bard we must be content to say:

"Hence 'tis we *wait* the wondrous cause to find,
How body acts upon impassive mind;
How fumes of wine the thinking part can fire,
Past hopes revive, and present joys inspire.
Why our complexions oft our souls declare,
And how the passions in the features are;
How touch and harmony arise between
Corporeal figure and a form unseen.
How quick their faculties the limbs fulfill,
And act at every summons of the will;
With mighty truths mysterious to descry
Which in the womb of distant causes lie."

"There is one view of the connection of mind and matter," says Professor Dugald Stewart, "which is perfectly agreeable to the just rules of philosophy. The object of this is to ascertain the laws which regulate their union without attempting to explain in what manner they are united." This relation has probably been most satisfactorily explained by those who compare the mind's action upon the body with that of vital force. For example, in reference to emotional excitement it is a well observed fact that any violent disturbance of the feelings quickly subsides when these unrestrainedly expend themselves (so to speak) in their natural expression. There is an instinctive restlessness, or tendency to general bodily movements in some individuals when they are suffering under emotional excitement, the indulgence of which appears to be a sort of safety valve for the excess of nerve force, while the attempt at its repression is attended with an increase in the excitement. Most persons are conscious of the difficulty of sitting still when they are laboring under violent agitation, and of the relief that is afforded by active exercise, and this is particularly the case, when the movements are such as naturally express the passion that is excited.

As we are ignorant of the precise mode of union of the immaterial mind and the material body we can not properly speak of the former as occupying any space or organ of the latter. Nevertheless we have abundant evidence to induce us to believe that the cerebral hemispheres are the organs of the mind. Not that the mind resides within the encephalon, nor that the brain is essential to its action but that the cerebrum is in some mysterious manner the organ in and through which the mind manifests itself to other minds. As Professor Mayo has said: "The brain in the higher animals and in man is the essential organ, in which through a mysterious union, sensation and volition, instinct and reason temporarily reside; if its function be extinguished death is the result, whether we regard man whose death is the separation of the body and of an immortal spirit, or animals whose death is the suppression of a narrower consciousness."

Yet while attaching so much importance to the hemispheres of the brain, physiology teaches us that the other parts of the nervous system are the real organs of common sensation, and that still higher manifestation, the perception of the senses; though it is to the brain that all these sensations and impressions are conveyed; as the great center of animal life it becomes cognizant of and directs every voluntary manifestation of vital force. When we examine the location and the phenomena of the five senses, viz: Touch, taste, smell, sight and hearing, we are led to the conclusion that these form collectively the receptive medium of the organism by means of which the mind becomes acquainted with the external world, and that the nerves affording the sensations and impressions of external objects are but media of communication from the external world to the mind. The hand does not feel, the tongue does not taste, nor the eye see, but the mind through the medium of these organs and the brain feels, tastes and sees. There are therefore two systems of perceptive faculties in man; one called body, the other mind. The former is dependent upon external excitements, the whole of which we collectively call nature. The latter is dependent upon internal excitements the whole of which we collectively call spirit.

Were we to consider fully the psycho-physical relations of man we would need first to study them as belonging to man in general; next it would be essential to examine them as they differ in distinct classes of men and in individuals. Age, sex, climate, temperament, education, occupation, condition, habit and idiosyncrasies all and each exert an important influence upon the individual and modify his or her psycho-physical relations. The limits of our paper will not permit so comprehensive a treatment of the subject, and we shall needs consult brevity in presenting illustrations of these interesting relations.

We will first notice how changes in the physical system affect the psychical, and secondly, how mental states influence the physical organism. The blood sustains an important relation to the mental condition but it doubtless acts indirectly through its influence upon the nervous centers. Experiments upon animals prove that the blood influences their nature, although the psychical functions of animals do not admit of a well founded comparison with those of man. The wilder animals into which the blood of tamer ones had been transfused showed themselves to be of milder nature and the older animals into which the blood of younger ones had been introduced to be more lively and active. Thus experiments upon man have been made, and developed much of interest. One man who had lost his memory, was drowsy and indolent, after transfusion became much more lively; another who lay in a state of lethargy accompanied with convulsions, after the injection of some calf's blood became quite conscious; another was cured of insanity by transfusion and a fourth of paralysis and mental debility. The state of the blood vessels influences the psychical condition. A replete and active condition of them stimulates to activity the nervous filaments encompassing them, and thereby heightens the psychical affections. Yet a plethoric condition of the vascular system causes drowsiness, mental lassitude and indolence. Vacuity and a relaxed condition produces an opposite effect similar to the tone of mind which exists subsequent to venesection or profuse hemorrhages;

vertigo and syncope or at least mental inertion. If the loss of blood be very great, the syncope is very profound and the return to consciousness is manifested by delirium, convulsions and death.

A peculiar delirium is one of the most common effects of excessive vascular depletion. A corrupt state of the blood, whether it arises from a sporadic, miasmatic, contagious, or any other cause has the effect of depressing the spirits. This is a fact so well known, that all of our works on the practice of medicine mention this change in the psychical condition, when classifying the symptoms of certain diseases; thus a knowledge of this effect is in many cases an important aid in forming a diagnosis of the malady present and also which stage of the disease has been reached. The exciting or depressing effects of alimentary and medicinal substances as produced through the blood upon the mental state has been recognized by every one of us. M. Otto, in a long series of careful experimentation, demonstrated to his satisfaction that each drug beside its general and special action upon the organs of the body, exerts at the same time an effect upon the mental faculties. Stimulants increase to a greater or lesser degree the quantity of blood which flows to the brain in a given time; as a consequence the whole brain is excited, provided the stimulation does not exceed a certain limit; but the local excitement differs according to the stimulant employed. Thus ammonia, musk, castor and ether increase the power of imagination and perception; the empyreumatic oils cause peevishness, melancholy and visions. Phosphorus acts upon the generative functions; so, likewise, does iodin and at the same time induces sadness, cantharides excites, while camphor diminishes the sexual propensity. Arsenic causes melancholy, gold hope, mercury increases mental sensitiveness and carbonic acid gas, placidity. Among the narcotics opium stimulates the sexual desires, the intellectual powers and the imagination. Belladonna dulls the mental faculties; hyoscyamus causes moroseness, jealousy and violence, cicuta weakens the understanding; digitalis diminishes and saffron increases the sexual desires; cannabis causes calmness, and amanitia muscaria courage. Tobacco operates in the same manner as opium. A dose of nitre is said to convert a state of cheerfulness into low spirits. Professor Otto also affirms that if the psychologic action of medicines were better known medical men might be able to vary their exhibition according to the character and mental peculiarities of their patients. The treatment of the various kinds of monomaniacal derangements also might be improved; and it is not improbable, that even a favorable change might be wrought on certain vicious and perverse dispositions which unfortunately resist all attempts at reformation whether in the way of admonition or even of correction.

The respiration being intimately connected with the circulation can not fail to exert through the latter an influence upon the psychical condition. The unimpeded function of the lungs in the respiration of pure air has a tendency to induce a cheerful and happy frame of mind, while their impeded action induces a feeling of mental depression. The inspiration of certain gases acts as a stimulus to the intellectual faculties whilst other gases produce depressing effects when inhaled. A remarkable difference has been noticed in the psychical condition of those who live in different climates. The courageous and cheerful people of the mountainous region contrast strongly with the effeminate and morose inhabitants of lowlands and the crowded portions of great cities. This influence even affects dreaming, the images that float before the eye being frightful and unpleasant when the respiration is impeded, while they are pleasing and beautiful when it is free.

The skin is rightly considered as having psychical relations because of its intimate connection with the respiration and circulation. Its function of elimination, if impeded has a depressing effect upon the feelings, while if performing well its office a sprightly and cheerful condition of the mind is induced.

The function of digestion has an especial influence upon the mind. This is clearly evidenced in the change which takes place in the psychical feelings when a person languid from fasting has partaken of a full and wholesome meal. It is a common saying that if you wish to obtain a favor of, or strike a good bargain with a man, interview him *after* his dinner, when a full meal has put him in a more genial and generous frame of mind than you would have found him had you approached him only one hour sooner. Though moderation in eating has the effect of favorably inciting the mental faculties, the consequence of excessive indulgence is to paralyze them. Some persons attach so much importance to the pleasures of the table, which so much absorbs their time and attention that they are rendered unfit for intellectua. exertion—they live to eat until they truly become

> "Fixed like a tree to some peculiar spot,
> To draw nutrition, propagate and rot."

Vegetarians claim, and perhaps with some show of proof, that animal food has a tendency to stimulate the passions, and animalize the nature, while a vegetable diet has a more refining influence upon the intellect and morals.

An obstruction of the normal excretions is antagonistic to a benevolent and cheerful disposition. "Could we penetrate into the secret foundations of human events, we should frequently find the misfortunes of one man caused by a morbid condition of the intestines of another, whom the former endeavored to inspire with sympathy in his fate at a moment when the frame of mind of the latter was affected by impeded secretion. An hour later and his fortune would have been made." The peevish, morose and often melancholic mood of the dyspeptic is too frequently observed to require other proof of the importance of a healthy action of the digestive organs to a pleasing and cheerful state of the mind.

The sexual function is perhaps the most potent of the physical influences upon the mental condition. The physical metamorphosis which takes place with puberty itself is too great to escape the notice of the most careless observer. It is then, as the German author Feuchtersleben has said, that, "the mind of the young man is powerfully impelled in the direction of the will, that of the maiden in the direction of feeling; images of undefined delight float before their minds; the enchantress, Fancy, reigns in all her loveliness; soothing and rapturous emotions alternate in a constant tumult of ecstacy; and love as a passion, with flattering but despotic hand—fortunate those who are able calmly to guide it—seizes the scepter. When happily controlled, whether designedly through education, and self-reflection, or undesignedly by a harmonious proportion of the de-

sires in the natural disposition, love becomes the source of the most beautiful psychical developments and he who never loved, is, or will become egotistical, mean, narrow-minded, covetous, timid, and but too often an unnatural sensualist. If ill directed the terrible passion becomes a source of most deplorable sufferings."

The gratification of the sexual desire has a decidedly psychical effect. If rationally indulged it exerts a wholesome influence upon the mental powers, while if inordinately gratified produces exhaustion of nervous power, mental depression and if carried to the extreme a total loss of every mental quality. Frightfully large is the list of victims of excessive sexual indulgence. Physical health and strength have been prostrated by it, intellectual powers have been totally destroyed, the moral element of the nature has been entirely subverted and a pitiful wreck of being has been left to drag out a most miserable existence in melancholy or it may be in insanity or idiocy.

Menstruation is in many women productive of mental changes. Pregnancy is marked by its peculiar longings. The climateric changes in some females give occasion to an altered and often to a melancholic frame of mind.

We will now proceed to notice the influence exerted by the mind over the physical system. It is a phenomenon which we all experience personally, observe continually in others, reflect upon but little and act upon far less than we might. Few have formed any adequate estimate of the source of bodily ills which have their origin in the mind. Physicians continually concentrating their attention upon the physical are prone to neglect the mental causes of disease; and probably not infrequently subject a patient to heroic medication, the true origin of whose malady was a deep-rooted sorrow which a moral balm alone could reach. In considering the influence of the mind upon the body, we would still further define the mind as the superintending, the guiding power over corporeal manifestations; it directs all the movements of the body, over which it has complete control; it is to the body what the engineer is to the steam engine, the body being but a mere machine suited to develop the operations of the mind and preserved and kept in order by the organic functions.

We assert that the mind derives none of its faculties from the body; it only employs the senses and their relation to the brain to form ideas, and it inherently possesses the power of so doing. The mind is dependent upon the body and external things for its knowledge in regard to them, but after that knowledge has been once acquired it is retained and may be recalled at pleasure. In the language of the great Abercrombie we would say: "The mind remembers, conceives, combines and reasons; it loves and fears and hopes in the total absence of any impressions from without that can influence in the smallest degree these emotions; and we have the fullest conviction that it would continue to exercise the same functions in undiminished activity, though all material things were at once annihilated." This opinion does not conflict with what we have previously said of the mind being influenced by external objects or corporeal conditions. Our own individual experience is constantly giving us proof of the correctness of both of these opinions, viz.: Of the dependence of the mind upon the body for its powers of manifestation and its independence of material things in the exercise of the qualities above mentioned, yet it is bound to earth for a purpose known only to the Great Creator.

But, to resume more directly our subject—the influence of the mind on the body—we would first observe that *feeling* exercises a marked influence over the animal economy, and when of a disproportionate character may become a great excitant or depressant. Many instances are recorded where death has been produced by sudden joy, others again by sudden grief. Sophocles, at an advanced age, and in the full possession of his intellectual power, composed a tragedy, which was crowned with such success that he died through joy. Chilon of Lacedemonia, died from joy, whilst embracing his son, who had borne away the prize at the Olympic games. Juventius Thalma, to whom a triumph was decreed for subjugating Corsica, fell down at the foot of the altar, at which he was offering up his thanksgiving. Fouquet, upon receiving the intelligence of Louis XIV having restored him to liberty, fell down dead. The Roman matrons after the battle of Cannæ, on seeing their sons whom they supposed had been killed, dropped dead upon the spot. These I have quoted from ancient records but every day, almost, brings us reports of like instances happening all about us. Fewer cases of sudden death from grief have been recorded, a longer time having elapsed after the cause of the emotional excitement before death ensued. Continued grief is the cause of many organic diseases. Many persons have become insane in consequence of being suddenly reduced to poverty, while on the other hand from a sudden accession of wealth, many have shared a like fate and become inmates of a lunatic asylum. Excessive feelings of displeasure when protracted produce a deficiency of innervation and quite a list of pathologic conditions have been attributed to this cause, e.g., muscular debility, dyspnea, typhus, amenorrhea, chlorosis, dropsy, scurvy, tuberculosis, scirrhosis, medulla sarcoma, etc. Some might reasonably question the assertion that mental feelings are capable of producing such pathologic conditions, for it is a matter difficult to prove, and yet there are doubtless many, very many cases of disease induced by mental conditions when we are not aware of the true cause. Some silent grief is gnawing at the vitals, and inducing disease varied in kind and degree, and in many cases causing death where no one, save the sufferer, knows the cause of his malady.

We are too apt to overlook the mental condition of our patients and the mental causes of their diseases. Here is a field for exploration wide and interesting, the psychologic causes of disease. "If a patient dies," says M. Reveille-Parise, "we open his body, rummage among his viscera, and scrutinize most narrowly all the organs and tissues in the hope of discovering lesions of some one sort or another; there is not a small vessel, membrane, cavity or follicle which is not attentively examined; the color, the weight, the thickness, the volume, the alteration, nothing escapes the eye of the studious anatomist. He handles, touches, smells and looks at everything; then he draws his conclusions one way or the other. One thing only escapes his attention; this is, that he is looking at merely organic effects, forgetting all the while, that he must mount higher to discover their causes. These organic alterations are observed perhaps, in the body of a person who has suffered deeply

from mental disease and anxiety; these have been the energetic cause of his decay; but they can not be studied in the laboratory or the amphitheater. . . Many physicians of extensive experience are destitute of the ability of searching out and understanding the moral causes of disease; they can not read the book of the heart, and yet it is in this book that are inscribed, day by day and hour by hour all the griefs and all the miseries and all the vanities and all the fears and all the joys and all the hopes of man, and in which will be found the most active and incessant principle of that frightful series of organic changes which constitute pathology."

(To be continued.)

THE THERAPEUTIC VALUE OF WEAK LENSES.

Remarks made in opening the discussion at the meeting of the Chicago Ophthalmological Society, March 13, 1894.

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The editorial on "Superfluous Spectacles" which a few weeks ago appeared in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, very justly and ably criticised the tendency, manifested in the practice of many oculists of the present day, to prescribe spectacles in every case of asthenopia. While formerly "weak eyes" have too often been regarded as the result of gastric disorders or systemic weakness, oculists of the modern school are evidently going to the other extreme in assuming anomalies of the refraction or the ocular muscles to be the only sources of discomfort in the use of the eyes. While formerly patients with "weak eyes" have often received unnecessary medicines, they now often receive superfluous spectacles.

I fully agree with the writer of that editorial, that it is time to call a halt to this one-sighted practice. In my clinic it has always been my aim, at every suitable opportunity, to impress upon the minds of my hearers the fact that the complaints of "weak eyes" may be due to a great many other conditions (local and general) independent of the refraction.

But while I am in perfect accord with the intent and purpose of the editorial, I can not sustain the position the writer takes in regard to the lowest degree of ametropia which can be considered as the cause of eye strain; I can not agree with him in drawing the line of usefulness against the glasses of very low power; and I wish to present to you the clinical facts in support of my opinion on this very important and interesting question.

The statements in that editorial to which I wish to take exception are the following:

1. That the cases in which half a dioptry of astigmatism leads to discomfort or headaches are exceptional and occur, as a rule, only when the general health is below par.

2. That the 0.25 cylinders or spherical glasses less than + 0.75 D. are merely of mythical value.

A careful study of my own observations has led to different results; it has led me to regard the 0.50 hypermetropic astigmatism as one of the most frequent, if not *the* most frequent source of eye discomfort and headaches caused by refractive errors. But inasmuch as the editorial admits that this degree of astigmatism is occasionally a disturbing factor, and that its correction may benefit the patient; inasmuch as it therefore concedes the propriety of prescribing the ½ D. cylinders under certain circumstances, I shall not discuss this point any farther, but confine my remarks to the second statement, which absolutely denies the efficacy of the 0.25 cylinder and of spherical lenses less than + 0.75 D. If such weak lenses have really no therapeutic value they should justly be denounced as "superfluous glasses;" if they have any value it behooves those who have tested their efficacy to accept the challenge to furnish convincing proofs for the same.

The mere fact that in a large number of cases of eye discomfort these low degrees of refractive errors are found, proves nothing, since we know these slight departures from emmetropia are so very common in the human eye. To assume that the patients would have returned for further treatment if the glasses prescribed had not given relief, is not an argument worthy of notice. And even the mere statement that the patient was relieved is in itself not sufficient evidence for the curative power of these glasses. If such glasses are prescribed to a patient suffering from slight blepharitis, or chronic conjunctivitis, or conjunctival irritation due to lachrymal obstruction or nasal catarrh, and his asthenopic complaints disappear under the treatment of these affections, we should not feel inclined to attribute the relief of the eye discomfort to the use of the glasses prescribed, but should rather consider them superfluous under such circumstances. Or if a patient has been working almost constantly by artificial light, and changes his habit after he received the glasses, we certainly could not regard the relief in such cases as convincing proof for the efficacy of the glasses.

But if all local or distant conditions which we know to produce ocular distress independent of refractive errors, are absent, or have been removed without restoring comfort to the eye; if the eyes are used under precisely the same conditions after the glasses have been prescribed as they were used before; or if an irritability of the eyes has resisted all treatment but is speedily relieved by glasses; then, and then only, we are warranted in attributing the relief of the eyes to the correction of the existing slight refractive errors. These conditions have been strictly adhered to in every one of the cases I now wish to present as clinical evidence of the therapeutic value of weak lenses. And from the fact that among the many cases of asthenopia and headaches I have seen in the last two years, there are only fifty cases in which I have prescribed such weak glasses, this fact alone may assure you that I have not prescribed glasses whenever a small refractive error was found, but that I have carefully considered all the conditions of the case before I decided that the use of the glasses was indicated.

In order to confine myself strictly to the question at issue (the value of sphericals less than 0.75 D. and 0.25 cylinders) I have selected cases only in which 0.25c, 0.50 D., or combinations of 0.25 or 0.50 with 0.25c were prescribed.

In all patients under 40 years, the refraction was taken under the influence of cocain and homatropin, but the eyes were tested again after the effect of the mydriatic had disappeared, before the glasses were prescribed.

To every patient who had not afterward reported, a letter was sent, requesting him to inform me whether he had used the glasses and whether they

relieved his complaints. By these means I have secured the desired information in thirty cases.

I have divided the whole series of fifty cases into four groups according to the different kinds of discomfort of which the patients chiefly complained.

But I do not propose to give a full report of all the thirty cases; I think a selection of a few cases from each group will answer our purpose as well and will be less tiresome.

I.—INDISTINCT VISION. TWO CASES.

Usually people with a slight degree of astigmatism do not experience any trouble in distant vision; but in the case of a lady, 33, whose left eye was amblyopic, the slight disturbance of vision in the right eye was decidedly annoying; V = 20-30 which was improved to 20-20 by + .25c 110.

The other case of this group is a very instructive instance to show how sensitive some eyes are to the accurate correction of a slight refractive error.

Case 2.—A gentleman, 46, has been using — .75 D for distant vision since twenty-five years; but though he can see with the glasses pretty well, they do not give him that clear and easy sight to be perfectly satisfactory. He can read 20-20 with — 75, but the letters are not clean cut; with — 50 V decidedly more indistinct. The round apertures of my astigmometer appear horizontally oblong with — 75; and vertically oblong with — 50; but perfectly round with — 50 ⊃ 25c 180; and with these glasses the test types and distant objects are perfectly clear. He has used the new glasses now a whole year with the greatest comfort and perfect satisfaction.

2. *Great irritability of the eyes; constant scowling and winking; sensitiveness to light; in reading the eyes become red, smart and burn and weep.* 12 cases; reports received from nine; all satisfactory.

Case 25.—Boy 12, constant frowning; eyes red and lids swelling after reading a short time. Refraction + 50 = + 25c 180; ordered + 25c for constant use. Was relieved, and because his eyes had been doing so perfectly well he left off his glasses several months ago; but after a few days was compelled to wear them again because the old symptoms had returned.

Case 33.—Girl, 15; dull pain in eyes; constant winking; very sensitive to light; mild conjunctivitis. Refraction + 50. Treatment removed the conjunctivitis in six weeks; but had no effect upon the other complaints; thus + 25 was prescribed for constant use for trial. The glasses brought relief at once; and after one year she reports "they still continue to do me good service."

One of the most convincing cases, I think, is the following:

Case 40.—Bookkeeper, 20; since more than a year has not been free from eye discomfort. After a few hours' work they burn and smart, and often a dull pain compels him to stop work in the afternoon. Very sensitive to light, can not read at all at night. Marked conjunctival irritation and slight fullness of the retrotarsal folds of upper lids. Refraction —1 = — 25c 180. Conjunctiva was treated; and while patient was not working his eyes rapidly improved; but when he went back to his books the old discomfort returned. After four months' fruitless treatment, + 25c90 was given for near work, and the topical applications were discontinued. This was six months ago; and he has been working over his books every day without the slightest discomfort.

3. *Asthenopic symptoms: Distant vision is very good, but reading causes pain in the eyes, or headache, a strained feeling over the eyes; a feeling of weariness and fatigue; sight becomes indistinct and unsteady.* 31 Cases. Reports received from sixteen; all favorable.

Case 14.—Boy, 14, never can read longer than a half hour; eyes get red, full of tears and painful. Refraction + 25c180. These cylinders were ordered for school work; and he reported after two months that the glasses had relieved him at once and continued to be satisfactory.

Case 41.—Miss N., 22, severe headache after reading or sewing; after twenty minutes' work sight becomes very unsteady; has to close her eyes to rest them a few minutes to continue her work. Refraction + 50 = 25c 90. Ordered + 25c for work. Asthenopia was entirely relieved.

Case 49.—Mrs. G., 30; since two years frequent headaches and a strained feeling after reading. Last year she was advised to use + 75 for near work, but received little benefit from these glasses. Refraction + 25 = + 25c 90; has used these lenses for reading, and writes now (after eight months): "I do not have the headaches I used to have before, and the print is never blurred as it used to be, which is very satisfactory, for it annoyed me exceedingly."

4. *Headache and other nervous symptoms which the patients do not connect with the use of the eyes.* 5 Cases. Reports received from 4; one negative, three favorable.

Case 4.—Mrs. D., 29; since many years headaches for which her physician could find no relief; when recently she complained of pain in the eyes, he referred her to me for examination. Refraction, R. E. + 50 = + 25c 180; L. E. + 50 = + 25 c 90. The 25c were prescribed for constant use, but her husband wrote me, "the headaches were traced to other causes and the glasses therefore discontinued."

Case 15.—Mrs. B., 35. Since twenty-five years has been doctoring for dyspepsia, frequent attacks of vomiting, and a very distressing tight feeling round her head. Sight very good; her eyes have never troubled her in reading or other near work. Two years ago one oculist prescribed glasses (+ .75) which seem to have been of some benefit to her, inasmuch as the vomiting became less frequent. Refraction + 75 = + 25c 90. Ordered + 50 = + 25c 90 for constant use. After one week she called to tell me her head was entirely relieved of that tight band and her appetite much better; and two months later she reported she had had no attack of vomiting since she wore the glasses, and had improved very much in health.

Case 43.—Mr. B., 44; since seven or eight years almost every day frontal headache which usually begins at noon and lasts till he goes to bed; has tried all kinds of treatment advised by different physicians. Refraction + 25c 180; the cylinders were given for constant use (and in addition + 50 for reading) and he returned after six and a half months to tell me he has had no headache since.

Case 47.—Miss M., 31; since childhood subject to headache starting over the eyes. In the last year the headaches were so frequent that she became quite nervous; can see very well and does a great deal of needle work without ever feeling the slightest discomfort in her eyes. Refraction + 50. I should not have thought of prescribing these glasses, had not the lady remarked that her head felt so much relieved after she wore them five to ten minutes at her second visit when the eyes had recovered from the effect of the homatropin. So I decided to let her wear the + 50 for trial; and she has called repeatedly to report of the continued great relief she has experienced.

Résumé: Of the fifty cases treated with weak lenses, thirty patients have reported good results, one patient has reported a negative result, and nineteen patients have not been heard from. If we take the most unfavorable view possible, and count every one of the nineteen cases not heard from as a failure, we may still be well gratified by the results of the treatment; for it has been successful in thirty out of fifty cases, or in 60 per cent. In the sight of these clinical proofs, it must be conceded that these weak cylinders are not superfluous glasses; that their therapeutic value is not mythical, but real; and that the oculist will render his patients a great service by prescribing these weak glasses whenever in his judgment he has good reason to believe that the existing low degree of ametropia is the source of the patient's distress.

We must not forget that the eye is the most successful in correcting by accommodative efforts the optical disturbances produced by slight degrees of hypermetropia or astigmatism, while in the higher degrees of these refractive errors it does not succeed, and therefore abandons the efforts. The moderate degrees, therefore are the prevailing errors of refraction found in patients complaining of the symptoms of eyestrain.

The degree of ametropia does not constitute the principal condition in the production of distressing symptoms; and experience does not sustain the statement that hypermetropia or astigmatism less than 0.75 D. seldom cause discomfort or headaches. The state of health, the condition of the nervous system, the occupation are very important factors,

and frequently account for the fact that in many persons a slight hypermetropia or astigmatism causes great distress, while other persons never experience the slightest discomfort from the same ametropia in kind and degree.

Many eyes can endure a great amount of strain with impunity, while other eyes are so constituted that their powers of endurance are quickly exhausted. One person may need glasses for the correction of a small amount of ametropia, while in another person the correction of a much higher degree is unnecessary, and glasses would be superfluous. We can not draw the line at a certain amount of ametropia; but should correct it, no matter how slight in degree, whenever it leads to disturbances for which eyestrain constitutes the most frequent cause.

Venetian Building.

REMARKS ON VAGINAL HYSTERECTOMY.

BY L. H. DUNNING, M.D.
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Vaginal hysterectomy is an operation so frequently done with such a high degree of success by so many different surgeons that I would not attempt to remark upon it, had I not had an unusual experience in two recent cases.

Having had my attention called to Pratt's modification of the operation, I procured copies of the *Medical Century* containing several articles by the author of the method, and others who had observed his work. The essential characteristics of his operation, so far as they differ from other methods, are as follows:

The uterine cavity is tightly packed with antiseptic candle-wicking to distend the uterus and make distinct its outlines. The Simons' position is employed and the uterus brought into view in the usual manner and stout threads passed through the anterior and posterior lips of the cervix. The initial cut around the cervix is made nearer the os than usual. The separation of the vaginal and cellular tissue and bladder is carried very close to the uterus and as high as the margin of the lower border of the broad ligament. This separation is effected by a spud or by the author's sickle knife. It is carried farther up before and behind, until the peritoneal reflection is reached, always keeping close to the uterus. The peritoneum is incised in front and posteriorly and severed close to the uterus laterally in either direction, as far as the broad ligaments. The index finger is passed beneath the broad ligament upon one side, so as to put it upon the stretch and to serve as a guide in severing the broad ligament from its attachment to the uterus. This is effected by cutting it very close to the uterus with the sickle knife, when the one upon the other side is treated in a like manner. This procedure, the author states, is effected with the loss to the patient of very little blood. It is said that the success of the operation all depends upon keeping close to the uterus, and that the uterine artery or some of its branches will sometimes be severed and much hemorrhage result if the tissues are separated even one thirty-second of an inch away from the uterus. The author in one article says he has performed forty-nine vaginal hysterectomies by this method, with the death of but one patient. It is further asserted that the recovery of the patients is greatly facilitated because there are no ligatures left behind to cause suppuration, or crushed tissues to necrose and slough away; lastly, that no nerve tissue is crushed or compressed.

Being favorably impressed by the advantages of this method, if safe, I decided to employ it in the first suitable case that presented to me for operation.

January 31 Mrs. A., aged 63 years, came to my private hospital for operation for cancer of the body of the uterus. She had passed the menopause ten years previously. She began having hemorrhages three months ago. These were not profuse and were irregular. There were fetid watery discharges. Friable particles had been previously removed by curettement and the pathologist pronounced them carcinomatous in character. I prepared to employ the method proposed by Pratt, and carried the method forward to the point of severing the broad ligaments from the uterus. (Here my courage failed me, probably on account of having lost a patient four years ago of hemorrhage in a similar case from a defective forceps.) The clamps were applied to the broad ligaments. The clamp upon the left side was applied so close to the uterus that when the uterus was cut away no tissue was left projecting beyond the inner blades of the forceps, so that while applying the forceps to the opposite ligament the forceps upon the left side pulled off and fell out of the hand of the assistant, falling upon the floor. Inasmuch as no hemorrhage followed this pulling off of the forceps, no attempt to secure the liberated broad ligament was made. The tampon was placed and the patient put to bed. She made an uneventful recovery, there being no post-operative hemorrhage. The forceps upon the right side was removed in sixteen hours, instead of allowing it to remain twenty-four hours, as had been my former custom. There was during this operation the loss of not more than one-half ounce of blood and not an artery tied and only one forceps left. Upon examining the uterus after its removal we found but two small arteries upon each side entering the uterus; one midway between the external and internal os and one about one-half inch above the internal os.

In commenting upon this case at a meeting of the Marion County Medical Society, I stated that I could see no reason why this uterus could not have been safely removed without the use of a ligature or forceps, and that I thought I should try the procedure in the very next case I operated upon.

February 9 the opportunity presented itself. Mrs. B., aged 36, came into my ward at the City Hospital for the removal of the uterus for an aggravated case of procidentia with dislocated bladder. There was also complete prolapsus of the vagina, and the bladder when filled with urine formed a tumor anterior to the uterus and all hung without the vulva between the limbs. Certainly here was a fine opportunity to do a new operation in distinct view. The packing of the uterus was omitted. The cervix was seized with a volsellum forceps to steady it and control its movements. The dissection of the lower segment of the uterus was carried forward with blunt pointed scissors. The uterus was hugged closely in the dissection. By the time we had reached the lower margin of the broad ligaments, five small arteries had been severed and were spurting vigorously. They were caught with catch forceps. We had by this time concluded it would not be safe in this case, at least, to sever the broad ligaments without clamps or ligatures, nevertheless, I concluded to sever one broad ligament before tieing or clamping. So at the proper stage of procedure I began cutting from below upon one side, but I had not proceeded far when a quite large artery was cut across and bled freely. From this time forward we returned to the old method of ligatures. On examining the uterus removed, a very different condition of the circulation was found than was present in the former case. There were five or six small arteries entering the uterus upon each side, and each one was nearly or quite as large as those in the former

case. The increased vascularity of the latter case probably could be accounted for on the ground that the woman had not reached the menopause and the uterine and peri-uterine tissues, in consequence of their prolapsus, had been for a long time in a condition of congestion. In the former case, normal atrophy of the sexual system had taken place. Not an artery spurted in the whole operation, while in the latter case not only did the numerous arteries bleed, but free oozing took place from the incised vaginal tissue.

These experiences lead to the old and oft repeated conclusion that a procedure which would be safe in one case if followed in some other would result disastrously. The wise and skilful surgeon must himself determine the course to be pursued in each case.

In the February number of the *Indiana Medical Journal* appears a translation from an article by Landau of Berlin, (translated by Dr. Bell) which credits Sauter of Constance, Germany, with having done the first hysterectomy in 1822. In the technique of the operation, without the use of speculum or retractors, the broad ligament attachments are severed from the uterus with the knife, and no clamps or ligature employed upon these structures.

Thus, at that early day, was performed and described in a monograph a vaginal hysterectomy, which in its essential features is identical with the one so recently brought forward by Pratt.

Dr. Bell informs me that Sauter's first case was successful, in that the patient lived four months, at the end of which time she died of edema of the lungs.

The tendency is strongly toward simplifying vaginal hysterectomy, but every operator is, I think, impelled to employ sufficient painstaking care to protect the patient against the greatest danger of the operation, viz: hemorrhage.

A CASE OF CYST OF THE CEREBELLUM.

BY WM. F. WEGGE, M.D.
SUPERINTENDENT NORTHERN HOSPITAL FOR THE INSANE, WINNEBAGO, WIS.

For the history of this case previous to the patient's admission to this hospital, I am indebted to Dr. W. H. Gunther.

J. B., admitted Oct. 18, 1893, aged 40 years. Occupation, sewer-builder; education, fair; a native of Canada; was first taken ill in the spring of 1893.

The first symptoms were observed by his fellow-workmen who noticed that at times the patient would stop in the midst of his work and appear unconscious of his surroundings for periods of varying duration. At such times his left eye would wink frequently. His work was always well done and nothing irrational was noticed. He frequently complained of headache, and claimed to have had a similar attack ten years previously.

Dr. Gunther was first called on Sept. 8, 1893, when he found the patient in bed, rather stupid; complaining of severe general headache, vertigo and numbness of all extremities. His temperature was 97 degrees F.; the pulse was small, weak, intermittent, and beating at the rate of 108 per minute. He was very much constipated. There were present singultus and belching of gases, but no vomiting.

The left eye was closed spasmodically at intervals; the pupil was very much contracted and responded rather slowly to the action of light. The right pupil was dilated; light reflex almost absent.

The tongue was protruded slowly, and was slightly drawn toward the left. Speech was tremulous, and sentences were frequently left unfinished. Hearing was defective.

He assumed the erect posture only with difficulty and some assistance. He showed a marked tendency to falling toward the right. At times a general tremor of the body lasting several seconds was observed. Motor and sensory disturbances were noted.

There was a gradual improvement lasting about one week, after which he again grew worse; urine and feces were passed involuntarily and his mind became more affected.

Status præsens: The patient is a man of rather below medium height, with poorly developed muscles and subcutaneous fat tissue. His complexion is sallow; the face is dull, expressionless and rigid; his neck is apparently held rigidly in position and is thrown slightly backward. (There are no evidences of syphilis.) He lies on his back with the body inclined toward the left. He is aroused with considerable difficulty; answers simple questions correctly but apparently fails to comprehend more complicated ones. Respiration is normal; pulse 100.

On examination there is no evidence of paralysis of the muscles supplied by the facial nerve; the tongue is protruded straight; hearing is somewhat impaired but swallowing is not materially interfered with.

There is weakness of all the extremities but no paralysis. Patellar reflexes are exaggerated, but there is no ankle clonus. The pupils are dilated, pupillary reflexes are absent and there exists total blindness. There is no indication of paralysis of the extra-ocular muscles. Ophthalmoscopic examination discloses a double optic neuritis.

The patient is unable to stand or walk alone and shows a marked tendency to falling backward and toward the left. Bowels and bladder are emptied involuntarily and, it appears, unconsciously.

It is difficult to estimate the amount of urine passed, but it is not excessive as near as can be estimated. It is of a light straw color; of acid reaction; has a specific gravity of 1025, and contains no albumen but sugar is quite abundant.

The subsequent events were marked by little of special interest. His mind became more clouded and for some time previous to his death was almost a total blank. At no time were there epileptiform convulsions or vomiting. Death occurred somewhat suddenly on Jan. 19, 1894.

An autopsy was made thirty-six hours after death, the brain being the only organ examined.

The dura was rather thick in several places and adherent to the pia at these points. The blood vessels were distended with blood; the convolutions were flattened; the ventricles enormously distended and filled with a clear fluid.

The basilar artery lay in a deep groove on the surface of the pons. The right olivary body and the right olfactory bulb were absent.

The left lobe of the cerebellum was much larger than the right; the former bulging anteriorly. On incision about one and one-half to two ounces of a clear colorless fluid escaped. A tumor of about the size of a filbert was found imbedded in the cyst wall.

On looking over the literature on the subject, I find one case of cyst of the cerebellum reported by Maunsell in 1889,[1] who trephined for and evacuated it successfully.

Dr. Wm. C. Krause[2] has also reported a case in which an antemortem diagnosis was made.

Dr. W. W. Keen[3] says that, "with the latter (referring to tumors of the cerebellum) the knee-jerks are habitually diminished;" and in a footnote suggests that this may be a useful detail in distinguishing between tumors of the pons and those of the cerebellum.

In my case the knee-jerk was distinctly exaggerated and it was slightly exaggerated in the case of Dr. Krause. I merely wish to call attention to this, because it tends to show that it is not well to pay too much attention to the fact that the knee-jerk is excessive in making a diagnosis in tumors of this region.

[1] Reference Hand-book, Vol. ix, p. 126.
[2] Journal of the Amer. Med. Assn., Vol. xxi, p. 481.
[3] Reference Hand-book, Vol. ix, p. 133.

Why the tendency to fall toward the right was marked during the early stages of the disease, and was later changed to a tendency to fall toward the left, I will not attempt to explain.

It may be of interest to note that in my case the glycosuria was permanent, while in that of Dr. Krause it was temporary.

THREE CASES OF EXTRA-UTERINE PREGNANCY.

ONE BEING COINCIDENT WITH NORMAL UTERINE PREGNANCY, AND ONE BEING A CASE OF ABDOMINAL PREGNANCY—OPERATION AND RECOVERY IN ALL.

Read before the Union Medical Association of Northeastern, Ohio, at Akron, Ohio, Aug. 8, 1893.

BY J. A. DICKSON, M.D.

YOUNGSTOWN, OHIO.

Case 1.—On Sept. 18, 1891, I was called by telegram to see Miss S., with the injunction to come by daylight in the morning, prepared to operate. I found my patient to be a young girl 18 years old and unmarried, with the history of suppressed menstruation for two periods. Two weeks before the time for the third period she was seized with abdominal pain and uterine colic, with a profuse discharge of clotted and shreddy blood, which was supposed to be a return of the long delayed menstrual flow. This peculiar flow continued for two weeks, but its long continuation was not a source of anxiety to patient or friends, on account of the long delayed menstruation. On the 18th, one week after the cessation of the flow, she rode fourteen miles, over a rough road in a huge Pennsylvania wagon. She was seized that night with terrific abdominal and uterine pain, with a resumption of the bloody discharge. On the morning of the 19th I found her exsanguined and apparently in collapse.

Upon examination I found a large mass on the left side, and the pelvis full of an undefinable substance. Womb pushed to the right. I elicited no information from either patient or friends except that of delayed menstruation, and a black clotted discharge lasting for two weeks, with its resumption now, after severe exercise, with pain, exsanguination and collapse. Suspect extra-uterine pregnancy and advise operation, with no idea that it will be accepted. To my surprise patient and friends readily accept. Operated at 11 A.M.; incision six inches in length in middle line. Upon reaching the peritoneum I find it black, and it readily ruptures upon being taken up in the bite of catch forceps, with a gush of dark clotted blood. I enlarge the incision to eight inches, and discharge a large quantity of blood clots and detritus. The fetus is washed out with the blood clots, apparently from eight to ten weeks old. Find the left tube to contain the ruptured fetal sac. Remove it entirely, tying close down upon the womb. Right ovary and tube perfectly healthy. Leave them, *in situ*, unmolested. Wash out abdomen with a Price irrigator, using common boiled water, as the operation was done in the country and such was the desperate condition of the patient that I could not send for distilled water. Closed incision with eight stitches. Dress with iodoform, and bichlorid gauze and put patient to bed with hot water bottles. So sure was I that the patient would die within the hour that I was glad, leaving her in good care, to get out of the house and take the train for home. Received a telegram the next morning that patient had reacted nicely, and was doing well. Saw her on the evening of that day. Temperature 101 4-5, pulse 98. The subsequent history of the case is that of uninterrupted recovery, without a bad symptom. The lady is now in Iowa, teaching school, having learned, it is hoped, a good lesson herself in the school of experience.

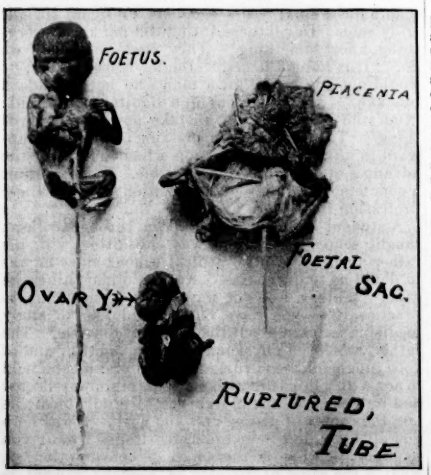
Case 2.—Mrs. F. aged 28 years. Married twelve years. Four children; two dead, two living; and two miscarriages. I was called to see her Oct. 17, 1891, when I found her miscarrying at about the fourth month. Fetus and membranes expelled *en masse* with no subsequent hemorrhage. After fourth week the menstrual period not appearing, she came to me for advice. Advised her to drift, and gave tonics. After eighth week saw her again. Upon examination find os soft and velvety, uterus enlarged, and mucous membrane of vagina dark, and purple in color. Probable pregnancy and advise her to wait and go through with normal pregnancy.

December 26 called to see her again, just ten weeks from former miscarriage. Flooding, fetus and membranes cast off *en masse* as before. Jan. 10, 1892, called to see her again. Flooding; discharge, clotted and shreddy; chills, severe abdominal pain, and bearing down sensations. She thinks that she "has piles" that "the trouble is in the bowel." Upon examination I find uterus above the pubes, but do not recognize it as such at the time, but think it the cervix of a retroverted womb. On account of normal pregnancy do not dream that it was complicated by extra-uterine. I find a large mass back of uterus in cul-de-sac, which I mistake for gravid retroverted womb, containing the remaining twin of a plural pregnancy. Try to replace uterus by gentle taxis, but find it to be impossible.

January 15, called early in the morning. Wasting, chilling, lips bloodless, pulse thready and weak, severe abdominal pain, tympany, collapse. Examined her under ether. Find everything as described before. Pass sound gently and find that it passes into small mass just above pubes which proves to be the womb. Mass back of uterus feels as large as small fetal head, soft and boggy like a cyst. Either a cyst or extra-uterine pregnancy. Probably extra-uterine on account of history and symptoms. Advise operation, which was as promptly refused. The history from this time until January 23, is that of recurrent bleeding, external and internal, peritonitis, tympany, excruciating abdominal pain and collapse. Jan. 23 seeks operation. Operated with assistance of Drs. A. C. Wilson, and M. S. Clark. Small median incision. Upon reaching peritoneum find it black with coloring matter of extruded blood. Find uterus, *in situ*, in normal position. Find mass back of uterus to be a mass of friable partly organized blood clot, in which is imbedded the ruptured left tube. Abdomen full of blood. Enlarge incision to pubes and through the umbilicus, as I find that I must introduce my hand in order to tease out the tube which is as thick as the wrist. Break through the nest of adhesions which seal over the mass, and scoop out with my hand a wash basin full of blood clots. Release tube from many firm adhesions and tie it off, close down upon the womb. Examine the other ovary and tube, and finding that they also are diseased remove them. Wash out the abdominal cavity with hot distilled water, with a Price irrigator, until the water comes away sweet and clear. Close up incision with seventeen stitches, introducing a drainage tube well down in Douglas cul-de-sac. Dress with iodoform and gauze and apply bandage, with rubber dam over the bandage for drainage tube. Time of operation fifty-five minutes. Dress tube every hour until serum comes away discolored. Remove tube on the second day. The history of this case is one of speedy recovery. Under small doses of antikamnia she has a minimum of pain, and secretions are left normal, which can not be said of morphia. Not a stitch abscess or a drop of pus about the incision. Remove stitches on the seventh day. Patient now perfectly well. Upon examination of the specimen find fetal membranes within the tube; the fetus having escaped into the abdominal cavity, is lost among the blood clots and detritus. For fear some of my confrerés may be disposed to criticise my long incision, I may say that through my initial short incision I was absolutely unable to reach the tube, such were the extent of the adhesions, and I would not have been able to deliver the tube, such was its size, through the short incision had I been able to reach it. Adhesions were simply frightful. I do not believe that the short incision is the *sine qua non* in abdominal surgery when there are such complications as were found in this case. Although the history of long incisions is not as good as that of short ones, I believe that with proper care, attention and cleanliness, a long incision is as safe as a short one.

My excuse for reporting this case at length is that with but one exception it is unique, and it may be of interest to the profession at large. The only other parallel case which I am able with references at my command to find, is one reported in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, March 29, 1890, by the Vienna correspondent of the *Medical News*, of which the following is a brief résumé: "A few days ago Dr. Rosthorn, assistant at Professor Chroback's gynecological clinic, operated upon a case of apparent ovarian cyst. Eight weeks before, the woman was delivered of an eight months child; labor normal.

The operation was made in the ordinary way and supposed cyst removed. At one portion a peculiar cord-like process was attached. Rosthorn examined the other ovary; it was normal, but while examining, a small hand slipped out from between the intestines. This was seized and a child was removed from the abdomen and to its umbilicus was attached a cord exactly similar to that found on cyst. They then looked for fetal membranes, and found them very deep and everywhere adherent to the intestines and peritoneum. The woman rallied and seven days after the operation was doing well. The careful examination of removed cyst showed that the tumor was merely the placenta, coiled up where it had been fastened to the left Fallopian tube." The following résumé of this case, quoted from same article, JOURNAL AMERICAN MEDICAL ASSOCIATION, March 29, 1890, might also be a verbatim résumé of my case: "There was an extra-uterine pregnancy and an intra-uterine pregnancy went on normally at the same time." It can not be established, though it is probable, that the



two children were really twins, and one developed within, the other outside of the uterus. The article quoted further says: "Thus it stands without a parallel in the history of obstetrics, etc." The history of this case makes mine all the more interesting to me, and I hope also to the profession.

Case 3.—On Wednesday, Aug. 12, 1892, I was called out of town to see a patient suffering from "inflammation of the bowels," as the message expressed it. I found my patient to be a young widow woman, 31 years old. Husband dead for thirteen months. History shows that at the time of death of her husband she had thought herself pregnant for about three months. At that time due, it was thought, to the sudden and accidental death of her husband, she had an attack of what was thought to be inflammation of the bowels but was evidently peritonitis. She was ill, and confined to her bed for several weeks, and the attack was very nearly fatal in its consequences.

After her recovery from this sickness she slowly regained her general health, with the exception that she complained of a dragging sensation in her left side, and thought that when she turned from one side to the other in bed she could feel something move in her abdomen. Bowels were constipated and there seemed to be more or less of an obstruction when they moved. Menses did not reappear until the third month after the death of her husband, when they came on with a scanty, not deeply colored flow at first, and gradually resumed their normal characteristics. From this fact she comes to the conclusion that she was mistaken regarding her pregnancy, and that up to the time of her husband's death it was simply delayed menstruation, and that its non-appearance after his death, was due to the shock resulting from his death, and the long severe attack of "inflammation of the bowels."

Her health continued to be fairly good until Aug. 11, 1892 when, while she was standing on a step ladder only two steps from the floor, her foot slips and she falls to the floor, striking her left side upon the ladder during her descent. From this time on she has the most severe abdominal pain, with symptoms of peritonitis, swelling, tympany, and most exquisite tenderness, so great indeed that she can not allow the bed clothing to touch her. Limbs drawn up, and can not allow herself to be moved and scarcely to be touched. In this condition I find her, on August 12 on my first visit. Pulse 140, very weak and thready. Temperature 104.4. Abdomen very much distended—so much so in fact that the surface is glazed and shining. Face pinched and anxious; nose, ears and finger tips cold, and all the other symptoms of collapse.

Upon making a bimanual examination I am unable absolutely to map out anything; such is the distension of the abdomen, the pain and anxiety of the patient, that she is unable to make the abdominal wall flaccid, and I am afraid in the present condition of patient to give her ether, as she seems to be dying. Although I recognize the gravity of the case, and the fact that it is certainly an operative one, yet on account of the seemingly near approach of dissolution, I decline to operate and come away, deeming it best if she must die not to interfere. Perhaps also I am influenced to this decision, by the fact that I am not prepared to operate, as the message says: "inflammation of the bowels," and I supposed the case to be one for medicinal rather than surgical treatment.

I fully expect in the morning to hear of her death, but during the night receive a message that she has rallied wonderfully, under treatment, and that she and her friends wish me to come immediately, prepared to operate, and that they will assume all responsibility. Go to her early in the morning. Pulse 100. Temperature 101. She seems much brighter and more hopeful. Decide at once to operate. With a probable operation in view, had the room cleaned and prepared the night before, rather hurriedly but still as carefully as possible, and operate at once.

Upon making the abdominal incision in the median line, so great is the distension or from the fact that there has been an old hernia, I immediately strike subperitoneal fat and peritoneum and enter the cavity. There is a rush of dark grumous but not offensive liquid, in which is floating a quantity of peculiar flocculent material. With the gush of water comes a a fetal hand and arm. I grasp this and with gentle traction deliver a fetus, to which is attached the cord. Upon making gentle traction upon the cord it separates, but with small catch forceps I grasp the distal end. With this as a guide I follow out to the site of the placenta to which is attached the fetal sac, and am able without the slightest difficulty to peel it off with my fingers. This is accomplished easily, probably on account of fatty degeneration at placental site.

Examine the left ovary and tube, find many adhesions at the site of old rupture and remove them. Right ovary and tube seem to be healthy and leave them.

The peritoneum and bowels appear to be in pretty good condition, although there are several places on the bowel where there are deposits of lymph, and one or two where surfaces are attached by adhesive inflammation. These I detach by gentle sponging with a fine sponge, being careful not to injure the bowel in the least, fearing that if I allow them to remain I will get knuckling of the bowel or at least loops into which other portions of the bowel may find their way. After removing all possible débris, and inspecting bowels carefully, I replace everything and wash out with hot water. I irrgate until the water comes away perfectly pure and clear; then close up with silkworm gut sutures.

Time of operation, from the time of incision until sutures were in place and incision closed, thirty-five minutes. Dress with a mixture of iodoform and boracic acid, gauze and cotton, apply bandage and put patient to bed. Patient rallied well and was soon out of danger. Remove stitches on seventh day, with a clean wound, without a drop

of pus. Pulse never went above 110, and temperature 102 after operation, and both were normal after tenth day. Bowels moved on the second day, spontaneously, and regularly afterwards every day. Gave no morphia whatever, to which fact I attribute the splendid condition of the bowels. Patient did nicely, during her whole convalescence, and sat up on the seventh day for the first time. She is now well and a very grateful woman. I did not explain to her her condition, until several weeks after the operation, when I explained it to her as I have given it below in my conclusions, and it seemed to satisfy her perfectly.

From a résumé of this case, I conclude:

1. That this was an honest woman, and the child her husband's.

2. She was pregnant, with fetus in left tube, at the time of her husband's death, and the shock of his accidental death produced a rupture of the tube which brought about severe peritonitis, the so-called attack of "inflammation of the bowels."

3. Rent in tube did not cause death by hemorrhage; she recovered from peritonitis; fetus, through the placenta, formed its attachment in new position, flourished here for a time, and finally died, becoming encapsulated.

4. Fall from stepladder ruptured fetal sac, and fetus escapes into the abdominal cavity, becoming a foreign body, and gets up a peritonitis which called for the operation.

THE FUTURE OF MEDICINE.

Opening Address delivered before the College of Physicians and Surgeons, Boston, Mass.

BY EPHRAIM CUTTER, M.D., LL.D.

NEW YORK.

PROFESSOR OF CLINICAL MORPHOLOGY AND APPLIED MEDICINE, COLLEGE OF PHYSICIANS AND SURGEONS, BOSTON, MASS.

I felicitate you, students of medicine, on the plane of the profession being higher than that of forty years ago, when I was in your place. The profession then, was not registered; now there are listed over 100,000 persons practicing medicine in the United States; some state the number to be 162,500. Then, medical students were attending some schools in bodies of 500 or so at a time. Now, their catalogues show between 800 and 900 in attendance in a single institution, and about 17,000 in the United States in 100 or more medical schools. This is a large number to be increased by the veterinarian, the dental and pharmacal students, but it is to be observed that the labors of medical men are so severe that but 17 per cent. will hardly cover the annual death rate.

Then, the medical organizations were few. The Massachusetts Medical Society with some 1,200 members was the largest. Now, we have national, international, Pan-American, district, city, State and specialist societies in all the schools of medicine. The Tenth International Medical Congress, Berlin, 1890, was said to be the largest gathering of scientific persons ever held. It numbered about 7,000. There were some 700 papers on its published program, indicating an intense activity of medical thought perhaps before unequalled.

Then, the medical journals were comparatively few. Now, the astounding number of about 250, are said to be published in the United States. Beside, medical books are published in large numbers. I have been told that from one publishing house in the West, where religion and medicine are conjoined, systemic medical treatises have been sent off by the car load! No other profession approaches, I think, this number of ephemeral and permanent vehicles of information on technical knowledge. In the light of these facts, complaints as to medical illiteracy, although not without foundation, are not fully sustained, and I doubt if there is any such exhibition of professional self-denial and seeking for others good, as shown in medical journals which are really maintained by gratuitous contributions.

Within forty years, such men as Pasteur, (a medical Moody) Claud Bernard, and Brown-Sequard in France; Virchow and Koch in Germany; Lister, Richardson and Mackenzie in England; Sayre, Sims, Salisbury, Beard, Elsberg, Holmes, D. H. Storer and Marcy in America, and many other masters in medicine well worth naming, have shed a flood of light in which you to-day can rejoice. Another remarkable evidence of advance is the division of the curriculum into three and four year courses. The writer when a medical student, made such a division for himself, adding special courses in chemistry, surgery, physical exploration and microscopy. The Post Graduate schools were foreshadowed by these special courses. But we must not think there were only ignoramuses forty years ago. As President Dwight truly said: "Our fathers, if they did not know everything, knew something." They made mistakes; we do. "It is human to err." Daniel Webster said: "I would not give a cent for a man who never made a mistake." Another of our high dignitaries has said: "One who never made a mistake never made anything." The fathers were pressing onward and upward in a path of investigation which has made the advances of our profession possible. Please permit a concrete illustration of the position of the medical profession forty years ago:

A student of medicine had been through college, taught school a year, and was consulting with his father about entering a medical school, since he was in doubt as to his course. Among other things he said: "Father, I do not want to study medicine to practice it as you have, but I would like to study medicine to learn about the causes of disease." The father, a beloved physician of brain, tactful, and of good judgment, keen in diagnosis and prompt and bold to act, with a large practice, for some minutes reflected and replied: "I would like you to study medicine and the causes of diseases all you wish. I will help you all I can, but there are three things I want you to study: 1, what is the cause of consumption? 2, what is the cause of diseases of women? 3, what is the cause of diseases of the nervous system? We doctors do not know anything about it!" No more was said, but the son was almost overwhelmed by eight words, which self-dethroned his revered father from the high position he had occupied as his son's idol, (as knowing everything); but the father's words forcibly depict the state of knowledge then; thank God, not now; as all three questions have been answered to the son's satisfaction as well as to other medical minds. Through the vista of four decades, this father appears, most honorable for his frankness, decision, judgment and forecast in giving to the son a grand life task. *I was that son.*

PRESENT STATUS OF MEDICINE.

Those of you who attend the course of lectures given by the well-qualified professors and lecturers of this College, will have more than work enough for four years, to understand this part of my subject. This good Faculty will give a far better presentation

than I can here or elsewhere. Hence I beg your indulgence to listen briefly to what seems to me to be the

FUTURE OF MEDICINE,

as influenced by American ideas, which my distinguished associates may think belongs to the chair of clinical morphologies and applied medicine. I say American advisedly, for while we give credit to all discoveries, we can not slight our own and be just. What I say is said on my own responsibility, and comes from the depths of my heart, prompted by filial love and an earnest purpose to do well the life task set as above.

1. The medical science of the future will include a new physical sign of the pre-tubercular state. That is, it will detect consumption any time within a year before the lungs are broken down, and in ample season to anticipate the usual signs furnished by auscultation and percussion, and to make proper treatment and cure not a dream but a tangible possibility. It consists in peculiar phases of the blood taken in connection with the other evidence which I have termed, "the morphology of consumptive blood," for several years, and which medical men have used for more than a quarter of a century; and this physical sign is most valuable because any disease is most hopefully treated before it is fully developed.

As foreshadowing what will be attained in this direction, I beg leave to refer to an essay written in 1877, illustrated with micro-photographs, original as to subjects and highest power objectives, that have been examined by leading microscopists in Paris, London, Berlin and America, and pronounced to be skilful as delineations and valuable as sources of scientific investigation. The regard of the writer for this sign, is seen from his motto for 1879, and his expressed belief that should the experience of two physicians for the past twenty-five years be realized by the regular profession of the United States, at least 13,000 lives annually would be saved.

The regard of such men as Dr. J. Marion-Sims may be inferred from his saying that this means of diagnosis was one of the greatest discoveries of the nineteenth century. The lapse of fourteen years, only confirms this opinion.

2. Another idea potential, is that chronic diarrhea is consumption of the bowels. This has so little actual energy that a late colossal medical dictionary disposed of it in the following six words: "Consumption of the bowels. Phthisis intestinalis." And yet it is a common disease best understood from the morphology of the feces, and traced to results of alcoholic fermentation.

If it is the physician's business intelligently to treat disease, then here is a fine field for future development. The prime cause is in improper feeding and the cure is based on proper feeding. I speak from experience, as I almost died from it in youth, but was cured by proper food.

It is my opinion that the cause of consumption is the acetic acid fermentation. For more than forty years, botanists have known of the bacillus of Koch, as pointed out, but have disagreed as to its relation to alcoholic and vinegar yeast. The morphology of common yeast shows this bacillus, so that the cause comes in with our food. This has been proved by pathologic synthesis of consumption in animals, and by cures by diet, forty cases of which, cured, most of them of ten years standing, were reported at the Tenth International Congress by the writer.

3. Bad feeding is one great cause of the diseases of women. Society ethics as to eating, exalt the carbohydrates, and demand the impoverishment of flour as to mineral elements in order to have bread white. Sweets are at a premium because of ethical esthetic taste. Women grown on society diet can not have full development. Hence in my opinion, the decline in the birth rate, and so much gynic disease. To use a womanly illustration, as well expect a dressmaker, who is furnished all materials for a dress, to make a garment with a dress pattern, a pair of scissors and a needle, as to expect to make up a good human body on carbon, hydrogen and oxygen when, it is said, forty elements are required by nature. While it is right to use all the peripheral means of treating gynic diseases, the central or centrifugal one of a proper diet should not be neglected. There are many opinions as to what a proper diet for gynic disease is, but my experience leads me to the conclusion that in cases uncomplicated with grave chronic disease, a diet of two-thirds animal and one-third vegetable is the best.

In this connection, may I say that in 1877 I published cures of uterine fibroids by diet in confirmation of what others have done. After the lapse of sixteen years, I re-affirm this position, and report that cases which had evidence enough to be called uterine cancer, have recovered by diet. If I said this was not so it would be daily denied by my wife, who was a case in 1877, and was cured.

4. Diseases of the nervous system, as apoplexy, paralysis, paresis, softening of the brain, sclerosis, locomotor ataxia "heart failure," a term too commonly used. These masquerade as nerve diseases, but are really mainly due to fatty and fibroid degenerations. It is impossible to separate the nerves from the organs and tissues involved in disease. A tooth with a killed nerve is dead practically. The pulsations of the heart come from nerve force. I never knew nerves caused apoplexy. Take the case, as reported, of the richest man in New England, found dead on the steamer, *Pilgrim*. This probably depended on the fatty degeneration of the muscular coats of the basilar arteries. There was a rupture and extravasation of blood into the brain tissue, which pressed on the nerve centers of respiration and cardiation so that the man was struck down dead as with a blow, hence the name, *apo*, from, and *plessein*, to strike down. Now what made the fatty degeneration of the muscular fibers in question? Answer, the impeded and sluggish circulation (English idea). The carbo-hydrates and fat food in excess, and their prolonged fermentation in the alimentary canal. (American idea). The treatment of apoplexy should be that of fatty degeneration, to-wit, the withdrawal of carbo-hydrates and fats, and the substitution of food which digests easiest, furnishes the most life and will replace every normal tissue in the body, as proved by trial. Nature, like the good dressmaker, furnished with all materials will take up and replace this fatty degeneration wherever fonnd.

As a cause of sudden death, heart failure is often reported. It shows a poverty of diagnosis, but the morphology of the heart would show often fatty degeneration.

Angina pectoris is termed a sclerosis of the coronary arteries. But the gravelly atheroma made up of choles-

terin and other bodies goes along with fatty degeneration. I know of a bad case of angina pectoris cured by diet. Asthma may be termed a neurosis, a bronchismus or spasm of the bronchi, from the irritation of gravel in the air passages, as the morphology of the sputum shows, and sometimes from the additional presence of a beautiful alga parasite, called the spirilina asthma, an American discovery of more than twenty-five years ago. Asthma has been termed a "gravel of the lungs" on this evidence. Now diet is the foundation way to remove the gravel and spirilina, and thereby the asthma. I thus cured a case of asthma of twenty-six years standing. Hay fever is "gravel of the lungs" also, the exciting cause being the pollen of plants, ipecac, castor oil, bean, pumice, etc.

To properly treat disease you must remove the predisposing and exciting causes, and nature cures. When you fire a gun you remove the charge (predisposing cause) as also the cap, (exciting cause). If the gun is not loaded it will not go off.

I do not know but that rheumatism may be called a disease of the nerves. The intense suffering of rheumatism would be *nil* without nerves. When people do not suffer they do not usually call themselves sick. Now rheumatism is gravel of the blood, as shown by an American years ago. The morphology of the blood shows this in the latent and actual stages. Food is usually the cause of gravels found in the human body. An American idea, adopted in Paris, is to wash out the gravels by distilled water; to this should be added food that will not produce gravel. A hint of what kind is seen in the action of a physician 40 years old, who was president of a vegetarian society in Germany, and found his temporal arteries atheromatous. He said: "Rigid arteries at my age, mean death." So he resigned and went on to animal food.

Gout is a variety of rheumatism which has a gravel of urate of soda. Any of the crystalline bodies found normally in the urine and feces may, when in the blood whence they come, cause rheumatism. The blood morphology also shows increase of fibrin filaments, red corpuscles, ropy, adhesive and coagulating in winrows. No one is really cured of rheumatism unless the morphology of the blood is normal. The enlargement of the heart found in rheumatism is mostly due to the resistance of the blood circulation. The heart has ganglionic nerve centers enough to be autonomic. The Bible statement, "the heart is deceitful above all things," sustains the heart's autonomy. The heart has something like cerebration in the brain, which I call *cardiation*. The heart knows when it should beat harder and does so, growing big by the excessive work. If it did not grow big, its work would not be done and death would follow. One way to treat cardiac hypertrophy, is to make the blood normal and nature will bring it down to normal size, other things being equal. I have seen this happen so often, that I am convinced of its truth. I feel sure that the future of medicine will embrace it, for no one wants a diseased heart when a normal one can be had.

THE RELATION OF FIBROID DEGENERATION TO NERVE DISEASES.

Whenever by improper feeding the nutrition is disturbed so that fibrous tissues replace that of normal spinal cord, sclerosis or hardening results, so that the fibrous sheaths of the spinal or cranial nerves are thickened and pinch the axis nerve cylinder. These are decidedly enough to cause nerve diseases which are recognized and are common. So far as I know, these lesions are incurable save by American plans of diet. I have seen cures. Some of the cases are mistaken for rheumatism but the morphology of the blood corrects this mistake, when taken along with the other evidence. The principle of the treatment is that nature cures fibroid lesions if the causes are stopped and food is used which is easiest digested, best assimilated and most nutritious, combined with other rational aids to treatment. How I have longed that our nerve specialists would take to this idea!

EAR AND EYE AFFECTIONS AS NERVE DISEASES.

It is an American idea that these are food complaints mainly. Certainly, when the ear communicates air vibrations up to 42,000 per second, and when the eye communicates vibrations of ether three thousand billions per second, it is because of the exquisitely marvelous development of the terminal nerves of the ear and eye! No nerves, aural or ocular, mean blindness and deafness. This subject is of great importance. It is stated that from 20 to 30 per cent. of the children in primary schools have defective hearing. Steps have been taken to relieve this class of unfortunates. The writer was called on to suggest some means of relief for this class and read a paper on the subject before a teachers' convention lately.

The pedagogic ground was taken that if the children with defective hearing could have a two-thirds animal and one-third vegetable diet, other things being equal, they would improve. The technical ground was that most of the defective hearing came from a fibroid thickening of the Eustachian tubes, and that the way to treat these cases was the same as when fibroid tumors had been removed by the diet.

Again, the cause of deaf mutism is largely from scarlet fever. But I say that had these cases been fed rightly, they probably would not have had scarlet fever so severely as to cause the lesions of deaf mutism. On this diet, a case of severe scarlet fever in my own family was fed, where there were abscesses in both ears and neck swelled even to the chin; the recovery was perfect, there being no deafness though it was feared. I am happy to say that Prof. Currier, Principal of the New York Asylum for deaf mutes, agrees with me as to the relation of food to deafness. If this is not a field for a splendid future of medicine now uncultivated, where is there one?

FOOD AND EYES.

When a distinguished oculist says that most eye diseases depend on difficult digestion; when cataract, arcus senilis, glaucoma and retinal apoplexy are forms of fatty degeneration; when the want of proper mineral matter in the food produces weak corneas and thus affects the sight, we need search no farther for a trophologic cause of defective vision, or imperfect ocular nerve action. Probably the common use of flour and sugar has a great deal to do with diseased eyes. As foods they are deficient in elements for ocular tissues. In the future of medicine this subject will be better understood and less grievous. The diet will contain the proper proportion of organic and mineral elements, the best to make normal ocular tissues.

BALDNESS.

Since twenty kine were wintered with water, hay, grain and salt, and came out with fine sleek skins, and another twenty kine were kept all winter in the same barn and on the same diet, minus salt, and came out with the loss of a large part of their hair, it would seem that food had something to do with baldness in these cases. Salt and air are food. Anything taken from without the body to sustain life and become a normal part of that body is a food.

The winter spent by the medical student above, in a chemical laboratory, taught that salt was an element in every tissue of the human body. The future of medicine will not overlook baldness, and rational treatment must look to food as a strong point, but not the only one.

The prevalence of defective teeth is so great, that we have a distinct department of medicine therefor. I am happy to state that the dentists generally admit the relation of feeding to the teeth and, so far as they can, insist on proper feeding. One of the most significant instances was given by Dr. Harriman of Boston, when in a three months' time a firm fibrous texture was restored to chalky and friable teeth by an outdoor life, and a diet of animal food. If such dense stony structures are so soon affected by diet, what must be said of the soft tissues?

The general profession should be proud of the advance made in its dental division. To it we owe surgical anesthesia. The admission of dentists to the AMERICAN MEDICAL ASSOCIATION is a great step for a more harmonious and effective medical future, and I fervently hope the time will come when food in motherhood shall be such that children will not be born with such defective teeth as now.

EVIDENCE.

I beg to show some evidence that the three queries put forty years ago have been answered, which would be satisfactory to the propounder were he alive to see it.

1. A report was made to the Berlin Tenth International Medical Congress, of 100 cases of consumption, 40 per cent. cures.

A young woman in consumption was consigned by her physician to a funeral. She took the plans hinted at here. Diagnosis confirmed and treatment guided by the morphology of consumptive blood. Christmas evening, 1889, she was married, and now has a family. Her case shows a romance in medicine, which I hope will be more common. My son, Dr. J. A. Cutter, married a like case. In the light of the 100 cases it can not be said that love cured these two cases without doubt.

2. In 1888 a feeble, married, childless, menopaused woman, came under my care for cancer of the left breast, which was of a hard, dry, flattened character, involving the pectoral boundary of the axilla. Over the right breast and in the middle of the right popliteal space, each, was a cauliflower cancer, with a stalk of one inch nearly. The nerves were shattered. Great pain was complained of in the right hypochondrium, where the abdominal wall was thickened and hard like a board. There was complete anteversion, vaginal and uterine hyperesthesia, which was removed by iodoform vectores and capsules. The cauliflower excrescences were removed by galvano-caustic and have not returned. The patient was put on the diet approved for cancer. In June, 1889, contrary to my expectations, I introduced one of my stem pessaries, just as I left for the British Medical Association meeting at Leeds. Dr. J. A. Cutter attended her in my absence. She wore her pessary till I returned, five months. It did not kill her, as one medical gentleman said it would, but was worn with relief, a space of four years! Sept. 11, 1893, a correspondent writes of her: "With other friends who have been here, I am surprised to find her so well and cheerful, assisting Addie, (her girl) in light duties, riding and enjoying herself generally. She still wears her instrument and has no trouble with it. Her husband had an ill turn for a week and she cared for him most of the time. *Diet was the great underlying principle of her treatment.* I would not be ashamed anywhere to present this answer to Query 2. A case of chronic rheumatism with ankylosed right knee joint, anteversion and hyperesthesia of the uterus, was entirely cured by diet treatment and my stem pessary. The uterus remained in situ at last accounts, after the pessary was removed.

DISEASES OF THE NERVOUS SYSTEM.

A few years ago, a boy 11 years old, was paralyzed below his waist so that he could not walk, and was deemed incurable. He ate largely of oatmeal, which of itself is a paralyzing food. His oatmeal was stopped. His diet followed the principles here advocated. In a few months the paralysis was gone and he is expected here to-day for you to judge of the reality of his cure.

Another case was a man of 28 who was unable to walk without help on level ground, or to get up stairs without climbing by the banisters. When he recovered so far as to walk alone, his head fell to the right, and had to be supported by his left hand. His right arm hung below the right knee. His nude body showed a genuine torso. The pains in the head and neck and right side were excruciating. The morphology of his blood showed absence of rheumatism. It was deemed a case of locomotor ataxia, from sclerosis of the spine. To confirm this an autopsy is needed, but if doctors must kill their patients in order to make a diagnosis, the future of medicine will be darker than it was forty years ago from the difficulties of medical jurisprudence. Unlike the veterinarians who kill for diagnosis, we must treat cases of sclerosis, and if we do not have verifying autopsies, but cures, it is rather a matter of rejoicing from a clinical standpoint. In about two years and a half treatment, in which no opiates nor anodynes were used, this case walks upright and is working on a farm. It might be said that a physician at the seashore who saw this patient carried there on a litter at the outset, and afterwards locomoting naturally, said to him: "I can not believe you are the same person;" but he could not gainsay the evidence, nor can I.

CONCLUSION.

Such is the partial prediction I have the honor to make, as mainly to be realized in clinical morphology and applied medicine. This is the field which lies before the students of medicine to-day. The progress that has been made is great, but as compared with that which our profession is bound to make in the near future it is slight. Before us lies the great ocean of medical truth, and the long line of our predecessors and our gifted and advancing contemporaries have but gathered a few pebbles upon its shore.

In sincerity, with humility and with courage should the medical student of to-day enter upon his advanced and ever advancing opportunities for usefulness and distinction.

CLINICAL HISTORY OF THE CASE OF PRESIDENT JAMES ABRAM GARFIELD.

BY ROBERT REYBURN, A.M., M.D.

PROFESSOR OF PHYSIOLOGY AND CLINICAL SURGERY MEDICAL DEPARTMENT HOWARD UNIVERSITY, WASHINGTON, D. C., AND ONE OF THE ATTENDING SURGEONS IN THE CASE OF PRESIDENT GARFIELD.

(*Continued from page 417*).

July 7, 2:30 P.M. The President vomited twice this morning, and complains of acidity of the stomach. Powders containing each fifteen grains of bicarbonate of soda were given him, and the surface of his body thoroughly and frequently sponged off. Temperature 101.4; pulse 108; respirations 24.

July 7, 8 to 11:30 P.M. He asked for the hypodermatic injection at 8 P.M., and slept until 11 P.M. He then awoke suffering very much from pain in his ankles. Some solution of bromid of potassium was sent for, but he fell asleep before it could be administered. Temp. 100.2; pulse 106; respirations 23.

July 8, 8:15 A.M. The President slept well during the night, and awoke at 6:30 A.M., in good spirits. Wound dressed antiseptically at 8:15 A.M. A slight slough separating from edges of wound with laudable pus. Very little inflammation around edges of wound. At 8 A.M. he took five grains of bisulphate of quinia. Temperature 99.2; pulse 96; respirations 23.

July 8, 1 P.M. Temperature 101.4; pulse 106; respirations 24.

Bulletin to consulting surgeons, Drs. Agnew and Hamilton:

July 8, 1 P.M.

The President's condition has not changed materially since our last telegram to you yesterday. During yesterday afternoon he was again troubled with acid eructations, and the administration of nutrients was again suspended for a few hours. One quarter of a grain of sulphate of morphia was given hypodermatically at 8:30 P.M., and was followed by tranquil sleep; towards midnight, however, he became restless, and complained a good deal of muscular soreness in his feet and ankle joints, so that we were on the point of administering an additional anodyne, when he fell asleep and on awaking was so free from pain that it was not administered. After 1 A.M. he passed the night tranquilly, sleeping composedly much of the time. He at intervals since that time has taken one ounce of albuminized chicken broth, alternating with an ounce of milk to which a teaspoonful of very excellent rum has been added; all this has been retained as well as five grains of bisulphate of quinia taken this morning at 8 A. M. The yellowish hue of the skin mentioned in our last telegram has sensibly diminished. When the antiseptic dressing was renewed this morning, the wound was found to be discharging a small quantity of healthy looking pus. The reaction accompanying the establishment of suppuration is, as might be expected, marked by a slight rise of temperature and pulse as compared with the same corresponding hours of yesterday; this however, we do not regard as unfavorable under the circumstances, and we should not be surprised if it continued during this afternoon and evening, or even for a day or two. July 8, 8 P.M. Temperature 101.3; pulse 108; respirations 24.

(Signed) D. W. BLISS,
J. J. WOODWARD,
J. K. BARNES,
ROBT. REYBURN.

July 8, 10 P.M. During the afternoon and evening, the milk in one ounce doses was given with one teaspoonful of rum, alternating with albuminized chicken broth, and at 7:30 P.M. his wound was again dressed. He expressed himself as feeling very tired, and a quarter of a grain of sulphate of morphia was given hypodermatically; after this he slept for nearly three hours. The same nourishment was continued during the night, and no nausea or other inconvenience was experienced.

July 9, 3 A.M. Came in and found him complaining of pains in the ankles; found them cold and wrapped them up in warm blankets, giving relief. July 9, 8 A.M. Wound was dressed antiseptically, and a small slough separated from the edges of the wound, with about two drachms of pus. Two ecchymoses showed themselves in the right hypochondrium. He was given at 9 A.M. ten grains of bisulphate of quinia, and the milk in doses of one and a half ounces with a teaspoonful of rum was steadily given during the day. Temperature 99.4; pulse 100; respirations 24. July 9, 1 P.M. Temperature 101.2; pulse 104; respirations 22. July 9, 7:15 P.M. Temperature 101.9; pulse 108; respirations 24. July 9, 8:15 P.M. Received a quarter of a grain of morphia hypodermatically, and went to sleep in a few minutes.

July 10:8 A.M. The President passed the most comfortable night he has experienced since he was wounded, sleeping tranquilly and with few breaks. July 10, 8 A.M. Temperature 100; pulse 106; respirations 23. July 10, 1 P.M. Temperature 100.5; pulse 102; respirations 22. July 10, 7 P.M. Temperature 100.9; pulse 108; respirations 24.

The wound was dressed at 8 A.M. and he expressed himself as feeling easy with a desire for further sleep; after the wound was dressed he fell asleep for nearly an hour and his pulse fell to 100. The milk and rum were continued during the day. His condition was favorable until 5 P.M. when he complained of great weariness and required many changes of position. The wound was dressed at 6:30 P.M. and one-quarter of a grain of morphia was given hypodermatically.

Dispatch to the consulting surgeons, Drs. Agnew and Hamilton:

July 10, 1881.

Such slight changes as have taken place in the President's condition since our telegram of yesterday are of a favorable character. About 7 P.M. his bowels were freely moved; shortly afterwards he received a hypodermatic injection of a quarter of a grain of morphia. He slept more naturally during the night than he has done since he was shot, and this morning is taking his nourishment well and appears on the whole better than hitherto. During the last twenty-four hours he has taken altogether fourteen ounces of milk and one ounce of rum. This morning at 10:30 he again received ten grains of bisulphate of quinia. Both yesterday and the day before, the wound was dressed antiseptically twice in the twenty-four hours. This morning it is discharging less pus than yesterday, but its appearance is healthy. (Signed) D. W. BLISS,
J. K. BARNES,
J. J. WOODWARD,
ROBT. REYBURN.

July 11, 8 A.M. Temperature 99.2; pulse 98; respirations 23. July 11, 1 P.M. Temperature 99.8; pulse 106; respirations 24. July 11, 8 P.M. Temperature 102.8; pulse 108; respirations 24.

The President slept well during the early part of the night. From 2 to 5 A.M. was wakeful, but after that time slept well until 8 A.M. Has taken more nourishment and with relish this morning. The heat of the weather at this time was simply dreadful, and the President suffered greatly from it. An effort

Entered according to Act of Congress, May 29, 1893, by ROBERT REYBURN, M.D.

was made to cool the air of the room by hanging long strips of muslin over light wooden frames, and keeping them wetted with ice water; this proving ineffective was abandoned. Mr. R. S. Jennings of Baltimore, had in operation to-day an apparatus for cooling the air in the President's room which was very successful. Air was drawn in by an exhaust fan through a subterranean chamber, filled with partitions half an inch apart, covered with Turkish toweling. The toweling was kept saturated from above by the dripping of water holding in solution ice and salt. The apparatus furnished from eighteen to twenty-two thousand cubic feet of air per hour at a temperature of 54 to 56 degrees Fahrenheit. At 11 o'clock this morning the outside temperature was 90 degrees Fahrenheit; at the outlet of the flue from the apparatus below, the temperature was 54 degrees, while at the head of the President's bed twenty feet from the outlet the temperature was 75 degrees. The President complained somewhat of a feeling of oppression in the chest; opening the window, however relieved him. The President was somewhat restless this afternoon, and after 2 P.M. began to be more feverish.

Dispatch to the consulting surgeons, Drs. Agnew and Hamilton:

July 11, 1 P.M., 1881.

During the past twenty-four hours the favorable progress of the President has continued. He has taken and retained twenty-two ounces of milk and one ounce of rum. This morning at 9 A.M. he had a slice of bread softened with milk. At 11:15 A.M. he took fifteen grains of bisulphate of quinia. There has been no irritability of the stomach at any time. Last evening at 7:15 P.M. he received a quarter of a grain of morphia hypodermatically and slept well during the night. The wound was dressed antiseptically yesterday evening and this morning, and continues to discharge a small quantity of healthy pus.

(Signed) D. W. Bliss,
J. J. Woodward,
J. K. Barnes,
Robt. Reyburn.

July 11, 7 P.M. Received his hypodermatic injection of a quarter of a grain of morphia, and went to sleep almost immediately and slept at intervals during the night. His temperature began to fall early in the night, and profuse sweating took place.

July 12 at 4 A.M. his pulse was 94 and his respirations 21 per minute while he was asleep. July 12, 8 A.M. Temperature 99.6; pulse 96; respirations 22. July 12. 1 P.M. Temperature 100; pulse 108; respirations 23. July 12, 7 P.M. Temperature 102.4; pulse 104; respirations 24.

July 12, 8 A.M. The President is feeling comfortable this morning. The rise in temperature noted in last evening's bulletin recurred, but came on an hour later. Wound was dressed antiseptically, very little secretion from wound. A two-inch decalcified drainage tube was tied into the wound. July 12, 1 P.M. The President is passing a comfortable day, and is much less restless than yesterday. Has more strength and power of movement in his limbs.

The following dispatch was sent to the consulting surgeons, Drs. Agnew and Hamilton, to-day:

July 12, 1881.

During the afternoon yesterday the President's temperature rose to the highest point it has yet attained. It began to fall, however, immediately after he received his evening dose of morphia—one grain of the sulphate hypodermatically, and this morning it corresponds with previous days. About 6 P.M. he had a copious and consistent movement from the bowels. His wound was dressed antiseptically yesterday evening and this morning. He continues to retain all the nourishment prescribed him, and has had twenty-four ounces of milk and one ounce of rum during the past twenty-four hours besides a small quantity of milk toast this morning. At 8:30 P.M. he received ten grains of bisulphate of quinia. His general condition this morning appears to us to be rather better than yesterday morning.

(Signed) D. W. Bliss,
J. J. Woodward,
J. K. Barnes,
Robt. Reyburn.

July 12, 7 P.M. The President's wound was dressed antiseptically, the drainage tube was removed, thoroughly cleansed, dipped in carbolized oil (1 to 12) and reinserted. The secretion from the wound was much more abundant than in the morning, and was rather serous in character. At 12 P.M. the President received his usual hypodermatic injection of a quarter of a grain of sulphate of morphia, and slept quietly during the greater part of the night, occasionally awaking. At 5 A.M. (July 13) he took four ounces of milk and one teaspoonful of rum.

July 13, 9 A.M. Temperature 98.5; pulse 90; respirations 20. July 13, 1 P.M. Temperature 100.6; pulse 94; respirations 22. July 13, 7 P.M. Temperature 101.6; pulse 100; respirations 24.

July 13, 8:30 A.M. The President is doing well this morning. His gradual progress towards recovery is manifest and thus far without serious complications. He took ten grains of bisulphate of quinia at 8 A.M. He took four ounces of milk and one teaspoonful of rum every two hours during the day, also a slice of milk toast and a little breast of woodcock. The President had less fever this afternoon than either yesterday or the day before. Wound was dressed at 6:15 P.M. Pus flowing freely from it. At 6:30 P.M. had the usual hypodermatic injection of a quarter of a grain of sulphate of morphia.

Dispatch to the consulting surgeons, Drs. Agnew and Hamilton:

July 13, 1 P.M.

The febrile rise yesterday afternoon was less marked and occurred at a later hour than on the previous day, and today for the first time the President's temperature fell to the normal point. The general progress of his symptoms appear more favorable than hitherto. During the last twenty-four hours he has taken thirty-two ounces of milk and one ounce of rum. This morning he had also a slice of milk toast, and chewed the breast of a woodcock, but did not care to swallow the meat. He had last night one-quarter of a grain of sulphate of morphia hypodermatically. In no twenty-four hours during the past week has he received more than a single dose of this quantity, and he slept well during the night. This morning he received ten grains of bisulphate of quinia. (Signed) D. W. Bliss,
J. J. Woodward,
J. K. Barnes,
Robt. Reyburn.

July 14, 7:30 A.M. The President slept quietly during the greater part of the night, but was awake from 1 to 3 A.M. Wound dressed at 7:45 A.M., free suppuration from the wound, and a new drainage tube was inserted. He had ten grains of bisulphate of quinia at 8:15 A.M. Takes his milk and rum every two hours. He ate a slice of milk toast this morning. After his wound was dressed, about 8:30 A.M., he had a profuse sweat and complained of coldness of the extremities. Bottles of hot water were applied and he was wrapped in hot blankets until reaction took place, which occurred in about one hour and a half.

July 14, 8:30 A.M. Temperature 99.8; pulse 90; respirations 22. July 14, 1 P.M. Temperature 98.5; pulse 94; respirations 22. July 14, pulse 94; temperature 98.5; respirations 22. July 14. The President during the greater part of the day was free from fever, but was sweating quite profusely.

Bulletin to the consulting surgeons, Drs. Agnew and Hamilton:

July 14, 1 P. M.

The President has continued to progress favorably during the last twenty-four hours. The febrile rise yesterday afternoon was again less than on the preceding day. He has taken since our last telegram twenty-nine ounces of milk, and an ounce of rum, as heretofore, beside a small slice of milk toast this morning, and at noon a small sandwich of scraped raw beef, with two teaspoonfuls of Valentine beef juice, and an ounce of Tokay wine of 1868. The medication has consisted of a single hypodermatic injection of one-quarter of a grain of morphia, given last night, and ten grains of bisulphate of quinia at 8 A.M. to-day. We administered yesterday at 6 P.M. an enema of soap and water which was promptly followed by a copious movement of normal consistence and color.

(Signed) D. W. BLISS,
J. K. BARNES,
J. J. WOODWARD,
ROBT. REYBURN.

The febrile rise this afternoon was less pronounced, and did not cause so much discomfort as yesterday. At 8:15 P.M. three-sixteenths of a grain of sulphate of morphia was given him. He went to sleep very soon and slept profoundly the greater part of the night.

July 15, 8:30 A.M. Temperature 98.5; pulse 90; respirations 18. July 15, 1 P.M. Temperature 98.5; pulse 94; respirations 18. July 15, 7 P.M. Temperature 100.4; pulse 98; respirations 20. This morning the President partook of some juice of rare roast beef on toast, and Valentine meat juice with a glass of Tokay wine. His wound was dressed at 8 A.M. and was suppurating freely; the drainage tube was reinserted.

July 15, 9:30 A.M. three grains of bisulphate of quinia was given, and this dose was repeated at 4 P.M. and at 8 P.M. At 12 M. he received fifteen drops of aromatic sulphuric acid and also at 5 P.M. During the day the President took more solid food. He complains of pains in his feet, but does not sweat as much as yesterday.

The following report was sent to the consulting surgeons, Drs. Agnew and Hamilton:

July 15.

The President continues to do well. The afternoon fever is daily less marked. A smaller quantity of milk has been given, and solid food substituted and relished. He has had less rum, and at intervals of several hours has taken some Tokay wine, in all about two ounces and a half of the latter. Last night his hypodermatic injection consisted of three-sixteenths of a grain of morphia which proved sufficient to secure rest. This morning we have altered the dose of quinia to be taken three times a day.

(Signed) D. W. BLISS,
J. K. BARNES,
J. J. WOODWARD,
ROBT. REYBURN.

July 15, 7 P.M. The President has continued to do well during the day. The afternoon fever has been slighter than on any other day since the 3rd of July. At 8:15 P.M. he had a hypodermatic injection of one-eighth of a grain of sulphate of morphia. He slept well during the night and awoke in the morning much refreshed.

July 16, 8:30 A.M. The President has passed another good night, and seems to steadily progress towards convalescence. July 16, 8:30 A.M. Temperature 98.4; pulse 94; respirations 18. No bulletin issued at 1 P.M. July 16, 7 P.M. Temperature 100.2; pulse 98; respirations 19.

Bulletin to the consulting surgeons, Dr. Agnew and Hamilton:

JULY 16, 7 P.M.

The President progresses steadily towards convalescence. During the last twenty-four hours he has had but one-eighth of a grain of sulphate of morphia, in a single hypodermic injection at bedtime. He slept well and this morning expresses himself as feeling quite easy. The quinia is continued in three grain doses three times a day. He is taking a still larger proportion of solid food, and with more relish than hitherto. Some old port wine has been substituted for the Tokay, its flavor being preferred by the patient. The febrile rise yesterday was less than on any day since you saw him. Hereafter our daily dispatch to you will be sent after the evening consultation.

(Signed) D. W. BLISS,
J. K. BARNES,
J. J. WOODWARD,
ROBT. REYBURN.

July 16, 7 P.M. The President has passed a better day than any since he was hurt. At 6:30 P.M. he received one-eighth of a grain of sulphate of morphia hypodermatically, and slept excellently during the night. July 17, 8:30 A.M. Temperature 98.4; pulse 96; respirations 18. July 17, 1 P.M. Temperature 98.5; pulse 90; respirations 18. July 17, 7 P.M. Temperature 100.2; pulse 98; respirations 20. July 17, 8:30 A.M. The President continues to improve; he passed an excellent night, and has a good appetite this morning. He took oatmeal and milk, lamb chops and bacon for breakfast.

Dispatch to the consulting surgeons, Drs. Agnew and Hamilton:

JULY 17, 7 P.M.

Since our dispatch of yesterday the President has done as our hopes then indicated. He has had a single hypodermatic injection of one-eighth of a grain of sulphate of morphia at bedtime, and slept well. Quinia in three grain doses has been continued, as well as the plan of nourishment hitherto reported. His bowels have been kept free by enemata. The wound is dressed with antiseptic precautions twice daily; there is now a free discharge of healthy pus. The afternoon fever both yesterday and to-day has been comparatively slight.

(Signed) D. W. BLISS,
J. K. BARNES,
J. J. WOODWARD,
ROBT. REYBURN.

July 17, 7 P.M. Our expectations of favorable progress have been fully realized by the manner in which the President has passed the day. He has taken more solid food and with greater relish than hitherto. His afternoon fever which is as slight as that of yesterday came on later. He received his hypodermatic injection of one-eighth of a grain of sulphate of morphia at 8:15 P.M. and went almost immediately to sleep. He slept well until between 4 and 5 A.M. of July 18.

July 18, 7 A.M. The President had a profuse perspiration this morning after 5 A.M., and felt quite tired after his wound was dressed. He ate some steak, and a poached egg, with potatoes and toast this morning. He had a nap from 10 to 11 A.M., and awoke quite refreshed.

July 18, 8:30 A.M. Temperature 98.4; pulse 88; respirations 18. July 18, 1 P.M. Temperature 98.5; pulse 98; respirations 18. July 18, 7 P.M. Temperature 100.7; pulse 102; respirations 21. July 18, 5 P.M. The President has suffered from nausea to-day, and nourishment was suspended. The wound was dressed at 6 P.M. and pus came freely from it. July 18, 7 P.M. The President had more fever this afternoon.

Bulletin to the consulting surgeons, Drs. Agnew and Hamilton:

JULY 18, 7 P.M.

Shortly after our dispatch of yesterday the President received a hypodermatic injection of one-eighth of a grain of sulphate of morphia. He slept well during the night, and this morning had a temperature of 98.4; pulse 88; respira-

tions 18. His day, however, was not quite so comfortable as yesterday. A slight gastric disturbance was noted towards noon, in consequence of which the quantity of nourishment administered was temporarily diminished. This was followed by rather more fever than yesterday, but the difference was not great, and is thought to be merely a temporary fluctuation.

(Signed) D. W. Bliss,
J. K. Barnes,
J. J. Woodward,
Robt. Reyburn.

July 18, 7 P.M. He received one-eighth of a grain of sulphate of morphia hypodermatically, and went to sleep soon afterwards.

July 19, 8 A.M. The President is sleeping soundly and quietly. He is sweating, though not profusely. This morning he took beef juice and milk with rum and one slice of milk toast. As he did not seem to relish solid food it was deemed best to give him chiefly liquids and in diminished quantities. During the morning he seemed quite bright and cheerful, and had very little fever.

July 19, 8:30 A.M. Temperature 98.5; pulse 90; respirations 18. July 19, 1 P.M. Temperature 98.5; pulse 92; respirations 18. July 19, 7 P.M. Temperature 99.8; pulse 96; respirations 19.

Bulletin to the consulting surgeons, Drs. Agnew and Hamilton:

July 19, 7 P.M.

Last evening the President received a hypodermatic injection of one-eighth of a grain of sulphate of morphia, and slept well during the night. He continues to take sulphate of quinia in three grain doses thrice daily, and has enemata when required. As anticipated the increased fever of yesterday proved only temporary, and he has had a better day to-day than on any day since he was injured. The wound looks well, and is discharging healthy pus freely.

(Signed) D. W. Bliss,
J. K. Barnes,
J. J. Woodward,
Robt. Reyburn.

July 19, 8 P.M. He received his hypodermatic injection of one-eighth of a grain of sulphate of morphia, and slept well during the night. July 20, 8 A.M. The President's wound was dressed, and it showed evidences of granulations.

July 20, 8:30 A.M. Temperature 98.4; pulse 86; respirations 18. July 20, 1 P.M. Temperature 98.4; pulse 88; respirations 18. July 20, 7 P.M. Temperature 99.6; pulse 98; respirations 19.

July 20, 8:30 A.M. The President took some milk toast and codfish for breakfast this morning. During the day took some milk and rum alternately with Valentine beef juice every two hours. He has also had three three grain doses of bisulphate of quinia, and three doses of fifteen drops each of aromatic sulphuric acid. He passed a comfortable day and was quite cheerful, and had scarcely any evidence of fever until about 4 P.M. July 20, 6 P.M. The President's wound was dressed and quite a free discharge of pus came from it.

Bulletin to the consulting surgeons, Drs. Agnew and Hamilton:

July 20, 7 P.M.

During the past twenty-four hours the President's progress has been uniform and satisfactory. He had a good night, and has expressed himself throughout the day as feeling quite comfortable. The indications reported in our last telegram have continued without change.

(Signed) D. W. Bliss,
J. K. Barnes,
J. J. Woodward,
Robt. Reyburn.

At 8 P.M. he received his hypodermatic injection of one-eighth of a grain of sulphate of morphia, went to sleep at 9 P.M. and slept well during the night. At 8 P.M. he also received three grains of bisulphate of quinia and fifteen drops of aromatic sulphuric acid.

July 21. At 8:20 and 2:40 A.M. he took some milk and rum and afterwards Valentine beef juice. The President had a good night, and expressed himself as feeling excellently this morning. He took stewed chicken and toast for breakfast. July 21, 8:20 A.M. Temperature 98.4; pulse 88; respirations 18.

July 21, 1 P.M. Temperature 98.4; pulse 92; respirations 19. July 21, 7 P.M. Temperature 99.9; pulse 96; respirations 19. July 21. At 10 A.M. he took three grains of bisulphate of quinia and fifteen drops of aromatic sulphuric acid. During the afternoon he seemed quite tired, though he took a fair amount of liquid food. At 6 P.M. his wound was dressed and a small portion of the shirt was discharged from it when it was dressed this morning.

Bulletin to the consulting surgeons, Drs. Agnew and Hamilton:

July 21, 7 P.M.

Since our telegram of yesterday the President has continued to do well. He passed a comfortable night. This morning a morsel of clothing, about one-quarter of an inch square, came away spontaneously with the pus from the deeper parts of the wound. It proved on examination to consist of cotton fibers with a few woolen fibers adhering. Medication continued without change.

(Signed) D. W. Bliss,
J. K. Barnes,
J. J. Woodward,
Robt. Reyburn.

July 21, 8 P.M. One-eighth of a grain of sulphate of morphia was given hypodermatically. The President slept well, and took nourishment twice during the night.

July 22, 8 A.M. The President's wound was dressed and a large quantity of pus flowed from the wound, with a small scale of bone and some fragments of clothing and a small slough. July 22, 8:30 A.M. Temperature 98.4; pulse 88; respirations 17. July 22, 1 P.M. Temperature 98.4; pulse 98; respirations 18. July 22, 7 P.M. Temperature 100.2; pulse 98; respirations 19.

July 22, 8:30 A.M. The President rested well, and took for breakfast milk toast with a little dried beef. During the day he took buttermilk alternately with milk and beef juice.

July 22. During the early part of the day the President seemed as well as usual; but became quite restless and tired towards evening. At 5:30 P.M. he had an enema, and at 6 P.M. the wound was dressed as usual. A free discharge of pus came from the wound, but not so abundantly as in the morning. During the day he took three doses of three grains each of bisulphate of quinia with two doses of elixir of gentian and tincture of chlorid of iron, each consisting of two drachms. He received one-eighth of a grain of morphia hypodermatically at 7:15 P.M. and soon went to sleep.

Bulletin to the consulting surgeons, Drs. Agnew and Hamilton:

July 22, 7 P.M.

The President rested well last night, and has been easy during the day. At the morning dressing the wound, which is looking very well, discharged several ounces of healthy pus. A little solid fragment that floated out with the discharge proved to be a thin scale of bone about one-eighth of an inch in length, with a morsel of sloughing fibrous tissue and a number of adhering fibers of cotton and wool. He continues to take and digest a reasonable quantity of nourishment. The evening hypodermatic injection of sul-

phate of morphia (one-eighth of a grain) and the quinia (three grains thrice daily) have also been continued.

(Signed) D. W. BLISS,
J. K. BARNES,
J. J. WOODWARD,
ROBT. REYBURN.

July 22, 8:30 P.M. He complained of feeling chilly; this was followed by a febrile rise of temperature which lasted until 10 P.M. (Temperature 101.) During the night he was restless and did not sleep well.

July 23, 7 A.M. The President fell asleep towards morning, and the dressing of the wound was delayed until he awoke. July 23, 7 A.M. Temperature 98.4; pulse 92; respirations 19. July 23, 10 A.M. Temperature 101; pulse 110; respirations 24. July 23, 12 M. Temperature 104; pulse 125; respirations 26. July 23, 7 P.M. Temperature 101.7; pulse 118; respirations 25.

July 23, 10 A.M. The President was more restless last night, but this morning at 7 A.M., while preparations were being made to dress his wound his temperature was found to be normal. At 7:30 A.M. he had a slight rigor, in consequence of which the dressing of his wound was postponed. Reaction followed promptly, and the dressing has just now been completed. July 23, 12 M. He is feverish and quite restless, and has vomited three times this morning a fluid tinged with bile. At the noon consultation to-day on account of the unfavorable change that has taken place in the symptoms presented by the President, it was deemed best to telegraph for the consulting surgeons. This was done accordingly, and Drs. Agnew and Hamilton arrived at 8:15 P.M.

July 23, 2 P.M. He has just fallen asleep. He slept until 3:45 P.M. 4:40 P.M. Again asleep and slept until 5:45 P.M. 6 P.M. He took three ounces of milk and one teaspoonful of rum. At about 12:45 P.M. the President began to perspire and his temperature began to fall gradually, until at 7 P.M. it had fallen to 101.7. There has been a free discharge of pus from the wound during the day.

At 11:30 P.M. President Garfield had another rigor (the fifth he has had since 7:30 P.M. of July 22) and afterwards sweat profusely during the night.

(To be continued.)

A JURY OF TWELVE MEDICAL MEN.

BY EPHRAIM CUTTER, M.D.
NEW YORK.

In the March 17, 1894, number of this JOURNAL, John A. Sterling, Esq., ably treats "The Medical Expert Witness," On page 378, column 2, line 46, he writes: "If it were possible to have a jury of twelve medical men in all cases where medical evidence is required, then the medical expert would be unnecessary." I think not, but that he would be needed more than under our present American system of medical jurisprudence, which for more than a generation has been an *opprobrium medicoram*. This opprobrium can not be changed because the bar does not want it. Well do I remember the efforts made some thirty years ago to change this system, which were led by my late honored and honorable teacher, Prof. R. E. Rogers of the University of Pennsylvania. Probably there never was a more eloquent lecturer in a medical college. He made the dry subject of chemistry so juicy and oratorically palatable that his lectures were always crowded, and teachers of elocution brought their pupils to study his deliveries as models of excellence. I well remember his Demosthenic plea before the AMERICAN MEDICAL ASSOCIATION. Yet his work was fruitless, not because it did not have all the elements of truth, active and professional disgrace (to quell); but because of the apathy of the profession itself. Prof. Rogers' words have had a potential power with me, and when I read the above quotation, it seemed to me that through it the dead eloquence of the talented and courteous Rogers might live to do good, and hence I write.

Why not have, in medical cases, a jury of medical men? There is no law against it, is there? Then it would need no extra legislation to have such a jury. Such a course would elevate America to the sensible plane of French and German medical jurisprudence.

As Prof. Rogers said, it is a disgrace to the medical profession to go into court and have different members swear to opposite facts in the same person. For example, to have six to eight medical men swear that a man had post-paralytic dementia, to be followed by homicidal mania, and then to have a set of the best alienists in America to swear that this was not so!

This question might well be discussed at San Francisco next June. *Why is it not possible, in cases requiring medical evidence, to have a jury of twelve medical men?*

FRAUDULENT MEDICAL INSTITUTIONS.

[Compiled for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

Of the twenty-one more or less active diploma "mills" still in existence in the United States, as described in the Report on Medical Education, by the Illinois State Board of Health, the following are among the most noteworthy:

"*Chicago Correspondence University*," Chicago, Ill. Incorporated in 1885; re-incorporated in 1887. "*National University of Illinois*," Chicago, Ill. Incorporated July 25, 1889. These two institutions, incorporated by the same person have had no existence as teaching bodies for purposes of medical instruction, but are operated solely for the sale of their so-called "diplomas." A "diploma" of this "National University," signed "F. W. HARKINS, Præses," and issued to THOMAS J. REDMOND, "*datum pridie Januarias, Anno Domini*, MDCCCLXXXIV," was offered for record by the said REDMOND in Logan County, Idaho, May 14, 1891. The discrepancy between the date of incorporation, 1889, and the date of the "diploma," 1884, has not been explained.

In September, 1892, the secretary of the "University," one RUDOLPH A. VAN ANGELBECK, "Lit. D. F. N. U.," wrote from Pella, Iowa, offering the degree of M.D. to a graduate of the Chicago Ophthalmic College. The following is an extract from VAN ANGELBECK's second letter: "In case you are afraid your diplomas do not entitle you to the M.D. degree, apply at once for a Fellowship, remitting $30 for same. Our Fellowships entitle holders to *any* degree." VAN ANGELBECK was arrested and indicted in March, 1893, for misusing the United States mails in carrying on his sale of the degrees of the "National University."

In November, 1892, the HON. JOHN W. FOSTER, Secretary of State, forwarded the complaint of the Department of Justice of the city of Amsterdam, Netherlands, showing that "this 'National University of Illinois' at Chicago has been selling medical

diplomas to foreigners who have not taken its courses." One "PROF. BLACKBURN, M.A., D.Sc., LL.D.," was the agent for sale in London, England, —"price two guineas."

During 1893 it transpired that these "diplomas" were being peddled under representations leading to the belief that they were from the new University of Chicago. DR. GOODSPEED, Secretary of the Chicago University, has no doubt that the University is being injured by HARKINS and his "diploma mills" and "would like to see the matter thoroughly exposed everywhere, particularly in England and Canada."

"*Malok's Brood.*"—During the past three years one JOHANN MALOK of Chicago, has profited by the wide-open incorporation laws of Illinois to the extent of securing charters for a brood of fraudulent diploma-selling institutions ostensibly formed,—according to the language of their articles of incorporation—"To instruct students in medicine and surgery and to give diplomas to graduates;" "to educate pupils in medical science, to graduate them and to issue degrees of M.D., and honorary degrees of M.D., and to issue diplomas as graduates of obstetrics for accoucheurs and midwives;" "to educate people in all branches pertaining to medical science and obstetrics, dentistry, hydrotherapeutics, magnetism, hypnotism and in everything that is for the benefit of the human body; and to graduate in the same and to issue diplomas and all kinds of degrees and honorary degrees for the same in present or absent." This last quotation is the "enlarged object of the German Medical College," chartered by the State of Illinois, Dec. 28, 1891, certificate of "enlargement" filed by the Secretary of State, July 14, 1892.

The first formed of the Malok brood was the "German College of Medicine and Obstetrics," charter granted Feb. 19, 1891. Then the "German Homeopathic Medical College," charter granted Dec. 8, 1891. Then the "German Medical College," charter granted Dec. 28, 1891; and the "German-American Homeopathic Medical College," the "German College of Gynecology, Pædology and Obstetrics," the "German Academy of Physiatric Physicians," etc. These institutions have been repeatedly and publicly denounced as fraudulent by the Illinois State Board of Health and their so-called "diplomas" refused recognition. Nevertheless they are legally incorporated under the laws of the State of Illinois.

Evidence of the sale of the Malok "diplomas" in Germany and elsewhere is being accumulated with the view of securing a repeal of these charters.

"*Indiana College of Medicine and Midwifery,*" Indianapolis, Ind. Chartered in 1878 by one CHARLES P. HEIL, who, at the time the Illinois Medical Practice Act went into effect, was at the head of the "Northwestern College of Midwifery," in Chicago. His "college" was refused recognition and he, himself, was denied a certificate by the State Board of Health. Being thus compelled to leave Illinois he removed to Indianapolis, where he started his "Indiana College of Medicine and Midwifery," attention to which was first called by PROF. AUSTIN FLINT of the Bellevue, in a letter to the Secretary of the Illinois Board, April 9, 1890.

DR. FLINT inclosed a diploma of HEIL's institution, issued March 12, 1890, and conferring the "degree of Doctor of Medicine and Midwifery" upon one ALEXANDER KUNTSLICH, by whom the diploma was presented to DR. FLINT for registration under the laws of the State of New York. Certificates of the institution were presented to the Illinois Board by midwife graduates, but were refused recognition and HEIL's subsequent career may be found under the title, "Ohio College of Obstetrics, Medicine and Midwifery"—*q. v. infra.*

HEIL also announced his Indianapolis institution as the "Department of Obstetrics, Indiana Eclectic Medical College," a college not recognized by the Illinois State Board of Health.

"*Ohio College of Obstetrics, Medicine and Midwifery,*" Cincinnati, Ohio. This institution was originally located at Indianapolis, Ind., see "Indiana College of Medicine and Midwifery," *supra.* In 1889 HEIL, the projector, obtained a charter under the laws of the State of Ohio and began operations in the city of Cincinnati. In 1891 he was reported in the *Medical and Surgical Register* of the United States as living in Covington, Ky., Dean of the Faculty of the Ohio College of Obstetrics, Medicine and Midwifery, Cincinnati, Ohio." The so-called "College" never had a local habitation or existence—a name only, under which to issue diplomas.

After leaving Illinois, HEIL was "graduated" upon one term of lectures by the Eclectic Medical College of Indiana, an institution not recognized by the Illinois State Board of Health. He appears in the current *Medical and Surgical Register* of the United States in capital letters as:

"HEIL, CHARLES P., A.M, Ph.D. (Ecl), Ind. Ecl. Med. Coll., Indianapolis, Ind., 1883; Late Prof. of Obstetrics in Ind. Ecl. Med. Coll.; Surg-Steward in the U. S. Navy and Hospital Steward U. S. Army Late War; Mem. of National and Ind. State Ecl. Med. Assn's; Examining Surg., The Brotherhood of Railroad Trainmen; Late Dean of the Ind. Coll. of Med. and Midwifery, Indianapolis, 1696 3d av. New York, N. Y."

"*Vermont Medical College—the Second Medical College of the American Health Society,*" Rutland, Vt. This institution has no existence in Rutland, Vt., except on Commencement day, when one GEORGE DUTTON of Boston, Mass., who comprises the "Dean and Faculty" of the concern, takes his "graduating class" from Boston to Rutland and there holds "graduating exercises" and issues his diplomas.

DUTTON first attempted to organize what he styled the "First Medical College of the American Health Society" in Boston; but the Massachusetts Act of 1883, forbidding corporations created under the general incorporation laws from conferring degrees in medicine, secured through the exposure by the Illinois State Board of Health of certain bogus "diploma mills" in Boston, frustrated this attempt. He then incorporated this "Second Medical College" at Rutland in 1883, under a Vermont act authorizing the creation of corporations to establish and maintain literary and scientific institutions.

Although his "diplomas" are issued in Vermont they do not entitle their possessors to practice in that State, the Supreme Court having decided, in the case of one of DUTTON's "graduates" against the State Board of Censors, that such institutions are not empowered to confer degrees or issue diplomas. DUTTON gives "instruction" in Boston, and has issued some forty-five or fifty Vermont "diplomas" on which persons are practicing medicine in States which recognize "diplomas or licenses from legally chartered medical institutions."

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SOCIETY PROCEEDINGS.

American Electro-Therapeutic Association.

The Third Annual Meeting Held in Chicago, Sept. 12, 13 and 14, 1893.

AUGUSTIN H. GOELET, M.D., President.

(*Continued from page 430*).

The following paper by HENRY W. MCCLURE, M.D., of Cromer, England, was read by title:

AN UNCONSIDERED AND IMPORTANT FACTOR IN THE EXPLANATION OF THE ACTION OF ELECTRICITY IN UTERINE DISEASE.

I might have given my paper another title possibly more appropriate, and that title would have been "A Plea for more Consideration for the Dielectric Tissues of the Human Body," yet in order to put the matter in a more concrete form, I have chosen to take the uterus to illustrate my thesis. My contention is shortly as follows: That the tissues of the human body are no exception to the general law that all opaque bodies are necessarily conductors and all transparent bodies insulators or dielectrics, more or less perfect; and that such a dielectric tissue as the serous coat of the uterus possesses the vital property of retraction, and such retraction may be quite independent of muscular contraction. This retraction is evidenced by a diminution of the superficies of the membrane; in other words, the serous coat shrinks, and that a portion of the current of electricity gets entangled in such a membrane in passing, but the force or energy is not lost. The kinetic electrode is merely made static, the shearing stress of the current has altered the condition of the molecules, inducing a strain in the dielectric, and I believe that this strain of molecular tension is analogous to, and identical with vital retraction or shrinkage.

Such a contention thus briefly stated I venture, not without extreme diffidence to bring before this important scientific Association, in the hope that it may lead to some discussion.

With your permission I will now bring what evidence I am able, in support of my thesis.

Professor Stephenson of Aberdeen, has devoted a great deal of time and labor to this subject of uterine retraction. Quoting the late Mathews Duncan he says: "It is certain that contraction does not necessarily imply retraction; that retraction is not dependent on contraction is difficult to prove, and that the only true safeguard against postpartum hemorrhage is this retraction of the uterine tissues." Professor Stephenson goes on to say that there is a way out of the difficulty; that is to exclude for the time being all muscular fiber out of the problem. The serous coat of the uterus manifests this phenomenon of retraction in a marked degree; that it possesses the property of shrinking in a perfect manner, and to produce the shrinking there must be definite tension of the membrane. It is the sole cause of the permanent shortening of the fiber, for after contraction alone (retraction being absent) we must always admit relaxation and the capability of the fibers to resume their original length; it is not an expulsive force.

From the revelations of frozen sections of the parturient uterus, it is evident that under retraction alone the uterine walls gather themselves around and are molded to the uterine contents, be they child, placenta or clot. To this molecular tension or retraction is due the permanent diminution of the superficies of the uterine walls.

Whatever electricity is, we must be convinced that it obeys the laws and acts as an incompressible fluid would act; that in passing through a conductor it meets with a certain amount of resistance or friction-like obstruction. But there is no tendency to reverse discharge or spring back. In an insulator, the electricity becomes entangled and this reverse discharge or spring back force is observed; in other words, the kinetic electricity has assumed the static form, electrical potential is stored up—a strain of the molecules has been produced; it is as if a bow were bent, the dielectric is able to give back again the same energy that was given to it by a reverse discharge—just as the arrow is propelled from the bow.

This condition of strain has been conclusively proved by examining by means of polarized light the glass in a charged Leyden jar.

Now, by the laws of electrical radiation, we find that the transparent tissues of the human body must necessarily be insulators or dielectrics, and that they are subject to the laws governing inorganic dielectrics; that is to this condition of strain, and that this condition theoretically in an animal membrane traversed by a current of electricity would cause tension in the lines of electrical propagation and pressure at right angles to this; in other words, it corresponds to shrinkage or the vital property of retraction, as demonstrated by Professor Stephenson in the serous coat of the uterus. No one doubts the power of the current, at least, at make and break, of exciting muscular contraction, a vital phenomenon. I do not see why we should deny it the power of exciting retraction, a function so closely allied yet seemingly independent. I use the word, seemingly, advisedly, as it may be that the non-conducting elements of muscular tissue may play a part of some importance in contraction.

We know that the skin offers an enormous resistance to the passage of the current, and if it were not for the many passages through it, the application of electricity to the human body would be almost impossible. According to Erb, muscle is the best conducting element in the body, and he would attribute the conducting power of the tissues to depend upon the blood and interstitial fluids. But he calls attention to the fact that nerve and muscle offer a much greater resistance to currents traversing them transversely than longitudinally; five to 1 in nerve, 9 to 1 in muscle. Imbibition of saline liquids does not, therefore, determine resistance altogether. I consider this has an important bearing on the subject under discussion, and to my mind the only solution to the problem is that the transparent elements of nerve and muscle are in the way of the current; so much electricity apparently disappears it is used up in producing strain of the medium. In the longitudinal direction there is nothing in the way; the electricity flows in the fluids between and outside the fibers. We find that a constant galvanic current during its flow does not excite muscular contraction.

We might here shortly review our knowledge of the action of electricity on a uterine fibroid. That interpolar electrolysis can have very little influence I think must be admitted, save in that it is the means of conveying the electricity. But the products of electrolysis, the acids and oxygen at the positive electrode, the hydrogen and bases at the negative electrode have an evident and important action. This is the galvano-chemic cauterization on which Apostoli places so much reliance. By his large clay electrode he nullifies this action upon the skin; the active pole or electrode being intra-uterine which may be the positive, acid, hemostatic, or the negative—where caustic alkalies are liberated. "The tangible effect at the points of entrance and exit of the current which according to the dose and duration will be chemic cauterization, more or less severe, variable in conformity with the pole and different in its character at the two poles."

Apostoli speaks also of the interpolar action of the current as setting up a process of disintegration proportionately wide and lasting, of the morbid products through which it is made to pass. So we have a chemic caustic action at the poles; of this there is no doubt, and according to Apostoli the result of this intra-uterine cauterization is production of contractile cicatrices which he believes to be the efficient cause in arresting hemorrhage.

Now what occurs between the poles? This is the important question.

We have the cataphoric action of the current by means of which fluids can be moved from one electrode to the other in the direction of the current. Quinin and iodid of potassium have been introduced into the body in this way, and their presence detected in the urine.

Erb confesses that we know practically nothing of the electrolytic and cataphoric action of electricity on the body, and with regard to the so-called catalytic influences of which we have to speak so often, he says we must confess they are purely hypothetic and that this expression is merely a collective name including several effects, of the individual nature of which we are still ignorant. Who can affirm that there are not other influences exerted by the current upon the human body, such as alterations in the molecular nutrition; in the production of heat; in the elementary affinity; in the osmotic phenomena on which the chief therapeutic phenomena depend. Among these, I would ask not an unimportant place for this theory of dielectric strain, which is manifested to a greater or less extent by all the transparent tissues of the body. We must all admit that when an electric current encounters a dielectric some of this electrical energy seems to disappear, but it is not lost we know; that whenever energy disappears in one form it reappears without loss in another. That is, the electrical energy that has seemingly disappeared has reappeared as molecular strain.

If, as Professor Stephenson has shown, the peritoneal coat of the uterus possesses this power of shrinking and so reducing the volume of the uterus, it is quite easy to conceive it so acting on a tumor situated in the uterine wall, under the stimulating action of a galvanic current and, be it remembered, a galvanic current of high intensity.

That a uterine tumor can be influenced by an electric current through the abdominal wall and made to shrink has been shown by a former President of this Association—Dr. Massey. I have had personal experience of the influence of the constant current in arresting hemorrhage in uterine fibroids where the electrodes were exterior to the uterus. Such experiences surely would lead one to look for another factor beyond the galvano-cautery, and I would ask at least your consideration of the problem of *dielectric strain*. To my mind, also, it plays a part of great importance in the action of static electricity on the human body; as I fail to see, if the body is a conductor, how the slightest influence could be exercised on tissues lying beneath the skin, but if we admit this dielectric tension and *lines of slip;* then all becomes plain and corresponds with our experience, as it has been most ably shown by Dr. Morton and the former President of this Society, that static electricity has a penetrating power equal if not superior to current electricity.

A. Lapthorn Smith, M.D., M.R.C.S., Eng. Fellow of the American Gynecological Society; Gynecologist to the Montreal Dispensary; Surgeon to the Women's Hospital, read a paper on

THE TREATMENT OF DYSMENORRHEA BY THE GALVANIC CURRENT.

In a paper read by Dr. Apostoli at the International Congress at Berlin, in 1890, occurred these words: "Open all the classical text-books and you will see that uterine atresia is a common cause of dysmenorrhea. I, myself, shared this opinion until facts, themselves, proved to me the contrary. Seeing in fact, one by one, patients whom I had treated since 1882 and who consequently followed intra-uterine treatment, which has necessitated the free introduction of the sound, I was struck with the great number of semi-atresias which I found. Seeing that the same sound could no longer enter, I was still more surprised with the reply which these patients always made, who had been nearly all suffering from dysmenorrhea before my treatment, and who had since then found themselves free from these symptoms, and remaining so notwithstanding the narrowing of the canal. These facts have led me to believe, contrary to the general opinion, that dysmenorrhea is most often an ovarian symptom. The intra-uterine galvano-cauterization which I employed has, therefor, in its favor the distinct advantage in the greater or less atresia which it eventually provokes without interfering in any way with the evolution of the periods—atresia which remains a posthumous witness to the cure of certain cases of endometritis, and which I consider as a vigilant sentinel which prevents a return of hemorrhage. But you will say, Then what about pregnancy? Yes, at the beginning of my practice I believed theoretically that pregnancy would be impossible, but theory has had to give way before facts, and to-day I can furnish thirty cases among my patients who have undergone intra-uterine galvano cauterization, even positive ones, and who without any difficulty became pregnant and went to full term."

Now my own experience has fully borne out on this point as it has on every other particular, the wise sayings of my distinguished friend. In nearly every case of fibroid treated by Apostoli's method in which the hemorrhage was diminished, the dysmenorrhea was cured at the same time. In one of the cases which I reported a year ago in the *American Journal of Obstetrics* sent to me by Dr. Jeanotte of Montreal, there was a large fibroid with very little hemorrhage, but with such severe dysmenorrhea that the patient had for eight years before coming under my care been obliged to go to bed for more than a week out of every month, and to have at least two hypodermics of morphin a day during the whole of her menstrual periods. This patient was completely cured and has remained cured now for more than four years.

At first I thought, as Apostoli did, that dysmenorrhea was due to stenosis of the internal os, and I therefore employed the negative pole for the cure of dysmenorrhea with the intention of thereby dilating the canal. But in looking over my cases in the light of the above words of Apostoli, I perceived that the pain had been equally well relieved in those cases in which the positive pole had been employed and with such high doses that stenosis was the result as were those cases which had been treated by moderate doses with the negative pole. This has led me to believe that they are right who maintain that dysmenorrhea is rather due to endometritis than to stenosis of the canal. This view is still further borne out by the fact which has been observed by many others that rapid dilatation alone is not always followed by cure, while it sometimes requires repeating many times. I have also observed that the result of rapid dilatation was much more successful when it was accompanied by curetting and the application of iodized phenol to the endometrium followed by drainage with gauze; measures which are precisely among the most modern and most effective for the cure of endometritis. Then again, in making use of the sound we generally find that its passage over the internal os causes acute pain which after a few applications of the galvanic current invariably disappears. It now seems clear that this is due to the inflamed condition of the uterine mucosa, for in a healthy uterus the passage of the sound even with considerable pressure causes very little or no pain.

As I said in my paper above referred to, I quoted the report of a thousand cases of dysmenorrhea, in over nine hundred of which there was undoubted endometritis. My own experience, although much more limited fully bears out the correctness of this statement. In nearly all of my cases which required examination I have found the uterus sensitive to the touch; there was backache, very often trouble with the bladder and rectum, a uterine leucorrhea diagnosed by means of the dry tampon of sublimated cotton left for twenty-four hours against the os, and in a great many there were reflex disturbances through the great sympathetic of such distant organs as the stomach, heart and eyes. On passing the sound I have invariably found that as soon as its extremity reached the level of the internal os, severe pain was caused which these patients stated was exactly similar to that which they suffered every month. On the other hand, I have seen so many cases of acute anteflexion without endometritis in which there was no dysmenorrhea that the opinion has been gradually growing in my mind that it is only when the above mentioned conditions are associated with endometritis that they cause dysmenorrhea. Moreover, my experience in the matter of treatment has been that in the majority of cases the most satisfactory results have followed the use of such measures as have been found to be most effective in curing endometritis, such as curing habitual constipation, removing other obstructions to the pelvic circulation, improving the circulation generally, improving the circulation in the pelvis by very hot douches and boro-glycerid tampons, rapid dilatation, curetting with and without the intra-uterine tampon, and with or without an intra-uterine stem and the application of the galvanic current.

With another year's experience, I can say the same thing even more positively. Since then we have constantly seen reports of cases of failure to cure dysmenorrhea by rapid dilatation alone. Even Winckel says that he had treated patients of his own, and had under his care patients of his colleagues who had been treated by rapid dilatation and even cutting of the cervical canal without avail.

Of the nine cases I reported a year ago I have seen or heard from seven who have all remained free from menstrual pain, and as far as I know so are the remaining two; and yet two of these cases have been treated by very thorough rapid dilatation. Since then I am sorry to say I have had other failures to cure by means of rapid dilatation alone. Two of these were followed by pelvic peritonitis in spite of the most rigorous antiseptic precautions, and probably owing to latent disease of the tubes, while the many cases which have been successful have at the same time been treated for endometritis by curetting and drainage. So that I am more than ever convinced that menstrual pain of uterine cause is, in the majority of cases, due to inflammation of the uterine mucosa, and can best be treated by the intra-uterine application of the galvanic current. The treatment, as I have already said, is almost painless, absolutely devoid of danger, only mild currents being employed and does not require the patient to lay up, or even to stop her usual work. She has only to come to the office twice a week for from three to six weeks, when as a rule her second period following the beginning of treatment will come on without pain so that in several of the cases I reported, the flow appeared while they were out walking and without their having made any preparations for it. In my paper above referred to, I stated that I employed the negative pole in the uterus in eight of the nine cases. It may be asked when should we employ the positive and when the negative pole? That depends upon the amount of flow and the size of the uterus. If the uterus is large and flabby or the flow profuse, I would use the contracting positive pole.

If, on the contrary, the uterus is undeveloped and the flow scanty, I would prefer the negative pole.

In case there may be some here who did not see my paper on the subject, I may be allowed to repeat the few brief directions for carrying it out:

After careful bimanual examination for the purpose of excluding pregnancy and of ascertaining the position and condition of the pelvic organs the vagina is disinfected by a douche, if this has not already been done at the patient's home. An ordinary Simpson's uterine sound of large size is then bent to the ascertained curve of the uterine canal, passed through the flame of the spirit lamp, cooled and insulated with a piece of clean rubber tubing to within two and a half inches of its extremity or less if we have reason to think that the uterus is undeveloped. In the handle of the sound a hole has been bored just large enough to hold the tip of the conducting cord from last zinc of the battery. The sound is then guided into the os uteri on the tip of the finger until it meets with some obstruction when a current of ten milliampères is turned on. In a minute or two the obstruction will seem to melt away and the sound will glide into the cavity of the uterus. The current is now gradually raised until the patient says she can feel it in the uterus, generally between twenty and fifty milliampères, being at once lowered on the appearance of the slightest pain. At the end of five minutes the current is gradually turned off again when the sound will be found to drop out almost of its own accord and very much easier than it entered.

This may complete the seance, or as an adjuvant and safeguard a boro-glycerid tampon may be inserted. The patient may return home and resume her duties forthwith, as such mild applications do not require any precautions in the way of resting, etc. The positive pole of the battery is attached to the ordinary clay abdominal electrode. When it is desired to attach the positive pole of the battery to the intra-uterine electrode, the latter must be made of platinum or carbon.

I can only say, in conclusion, that I have no hesitation in recommending a treatment which in my hands has given such good results.

DISCUSSION.

DR. MASSEY was glad the author was more positive now than formerly, in his use of the galvanic current in cases characterized by pain. It should not be forgotten, also, that his work originally was that of an operating gynecologist.

The speaker said he could corroborate everything which had been said in the paper about the ease of the treatment, and its freedom from risk in the hands of any one competent to make intra-uterine applications. He did not believe an application should be made to the interior of the uterus oftener than every two or three days. He rarely saw atresia unless very strong currents had been used, or the operator had omitted to insulate the portion near the os. It is for this reason that he preferred to insulate the instrument with shellac. The obstruction at the internal os is largely due to spasm.

He also wished to commend what had been said about painful menstruation being often of a neuralgic nature. He had called this condition "menorrhalgia" instead of dysmenorrhea.

DR. SPRAGUE said he had had more satisfaction in this line of treatment than in any other; for he had very rarely failed to relieve dysmenorrhea by intra-uterine application of electricity. He had not tried the positive pole very much, but had not found it as good as the negative. He had used moderate currents, and he had not produced atresia, but on the contrary had relieved what atresia already existed. It is much more probable that the pain which is induced at the internal os is due to hypersensitiveness of the nerves than to endometritis, because it is relieved by a current so mild that it could hardly be expected to affect an endometritis. He never used over fifteen milliampères.

DR. HAYES wished to place himself on record as having the same clinical experience as Dr. Smith. The other day he had a case of dysmenorrhea which was supposed to be due to atresia, but he treated it with intra-uterine galvanization, and was much pleased to see it yield.

DR. CLEAVES said that after an experience of seven years she could corroborate what Dr. Smith had said. She thought dysmenorrhea was quite as often due to pelvic congestion as to endometritis; hence, it was relieved by quite mild currents. She could also corroborate what was said about this treatment not producing sterility, as a number of her patients had become pregnant within a few months after the treatment. She preferred mild currents, and gave the treatment not oftener than once in five days or a week.

One patient who had been formerly treated by several eminent specialists, and who had worn a glass stem after divulsion for several weeks without relief, was completely cured about seven months ago by mild applications of positive galvanism. She had remained perfectly well, and for the first time in her menstrual life is now absolutely free from pain.

DR. KELLOGG said that the use of the galvanic current for the relief of dysmenorrhea is its most important use; it is almost a specific for certain forms. In the great majority of cases, dysmenorrhea is not due to atresia, and this is why the surgeons have very largely abandoned the old method of dilatation advised by Dr. Peaslee. At one time he curetted these cases after dilatation, because he found that in cases where there was no obstruction in the canal, there were vegetations present almost without exception. He thought these vegetations swell up at the menstrual period, and produce an obstruction only at this time. In these cases the use of ten to twenty milliampères with either pole—most commonly the positive—is very effective.

In another class the dysmenorrhea is due simply to hyperesthesia, and here he always uses the positive pole, as it destroys the sensitive nerve endings. He was very certain it did not prevent conception.

DR. DICKSON also wished to indorse the use of galvanism for this condition. He took great pleasure in saying that the surgeons and gynecologists in the hospital with which he was connected were now looking much more favorably on the electrical treatment. Cases in which the uterus is so irritable that uterine colic comes on, on the introduction of an instrument, yield very readily to galvanic treatment. He also believed with Dr. Cleaves that the condition is more often due to pelvic congestion than to endometritis.

His electrode for this work consists of an ordinary piece of copper wire, the size of a common uterine sound, the end of which is readily rounded. It is bent to the proper curve, and silver plated, and then insulated with hard rubber, for such tubing can not be easily procured to fit wire of various sizes.

DR. MARTIN expressed his appreciation of this paper. He thought as electricians we should not forget that we are speaking to the profession at large. Every case of dysmenorrhea is not by any means suitable for galvanic treatment. The treatment should be preceded by a thorough examination and the making of a careful diagnosis. We should not fall into the old-time quack practice of "giving" electricity. Occasionally dysmenorrhea is due to occlusion of the os or canal; sometimes it is due to non-development of the uterus, in which case the faradic current of slow vibration to develop the muscular tissue is more suitable than is the galvanic current. In another distressing form due to tubal and ovarian difficulty, we would get disastrous results from the galvanic current. A tubal or ovarian abscess, or the so-called cystic ovary will not yield to the galvanic current when it will frequently yield to a sedative current of high frequency. Even this should be used with great caution lest it cause the expulsion of the contents of such an abscess into the peritoneal cavity. For endometritis or stenosis of the canal, he agreed that galvanism should be used, and he preferred the positive pole with an electrode insulated beyond the os. He had devised an electrode specially for such work.

DR. WALKER said that galvanism is a failure if used as a specific. When the dysmenorrhea is more marked two or three days previous to the flow, he never gives galvanic treatment until after a careful examination of the appendages under chloroform.

DR. SMITH, in closing the discussion, said that several of the objections raised were really answered in the paper because he had expressly stated that the treatment is not to be begun until after a most careful and thorough examination for diagnostic purposes. Being an operating abdominal surgeon, he had forgotten to emphasize the fact that the treatment should only be employed by those competent to determine the existence of disease of the appendages. In the majority of cases he believed dysmenorrhea was due to spasm of the internal sphincter, the result of reflex irritation from an endometritis. It is for this reason, that he applies the current directly to the internal os, for it is well known that when there is a small ulcer in this situation, a mild cauterization of these terminal fibers will often temporarily give relief.

(To be continued.)

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All members of the Association should send their Annual Dues to the Treasurer, RICHARD J. DUNGLISON, M.D., Lock Box 1274, Philadelphia, Pa.

SATURDAY, MARCH 31, 1894.

THE FORTY-FIFTH ANNUAL MEETING.

The next annual meeting of the AMERICAN MEDICAL ASSOCIATION will be held in San Francisco, June 5, 1894. The programs of the Sections, so far as completed, show an amount of work that will not in any degree fall below the high standard of last year.

We are much pleased at the tendency to condense the papers, and in the interest of those who will read them, we hope that all Section officers will use their influence in inculcating the value of brevity as an aid to correct understanding. Redundancy of expression detracts from the merit of an article, and often renders the meaning obscure.

The enlargement of the JOURNAL made last July, will we trust be permanent, and will enable the early publication of the Transactions.

The revised list of members is now in preparation, and together with the report of the committee on the new Constitution, will be ready for distribution at the meeting. By the rules, this list must be published triennially, and few can imagine the labor involved in making the necessary changes.

We sincerely hope that the publication of this list will have the incidental effect of stimulating the members to renewed effort. We earnestly appeal to every member of our already great ASSOCIATION to use his personal influence to increase the membership. The ASSOCIATION has, to-day, more members than it ever had, but it has only about one-third as many as the British Medical Association. By a little more effort on the part of our members we might have twice as many members as that excellent organization.

The Committee of Arrangements have set about the task of bringing into fellowship the entire regular profession of the Pacific Coast, and these added to the existing list, will give the ASSOCIATION a greater impetus than has been given at any recent meeting. One of the arguments used to bring them to this meeting, is that they will have an exceptional opportunity to meet their Eastern brethren. This demands from the old members that they make every reasonable sacrifice to benefit the ASSOCIATION by attending the meeting and taking part in its proceedings.

The trip itself promises to be most attractive; the stops among the Rocky Mountains of Colorado, the visit to Salt Lake and the scenery on the Sierras, will be remembered through life. By traveling on the regular ASSOCIATION train, there will be no extra fare of any kind required for the time taken up while inspecting Denver, Colorado Springs, Manitou, Glenwood Springs and Salt Lake. The itinerary will be published next week.

The rates promised are the excursion rates given to visitors to the Midwinter Fair which will be open until July. We are promised the benefit of any lower cut rate that may be prevailing at the time.

The return trip may be taken by way of the Northern Pacific Railroad, or may be taken by any of the direct lines.

Those desiring to see the Yellowstone Park and its natural wonders may return by way of the Northern Pacific.

We earnestly urge all who can, to make the excursion. Not only will the Doctor have an agreeable and pleasant journey but, on his return, the sick room of many a sufferer will hear the story of his eventful tour to the Golden Gate.

NEW JERSEY MEDICAL EXAMINING BOARD.

The State Board of Medical Examiners of New Jersey is now in the fourth year of its existence: and during this short time has demonstrated its importance and necessity. It has not alone elevated the standard of qualification of those who were licensed; prevented incompetents from practicing, and the influx of those who had fraudulent diplomas as was common before the law was passed, but exercised a decided influence upon medical education. The Medical Society of New Jersey, organized in 1776, was given authority to confer the degree of M.D. in 1866, but the Society did not often have an opportunity to exercise this privilege, for the reason that, as a rule, the medical colleges had far less rigid examinations. The law that was in force before the Medical Examining Board was created, simply required the registration of a diploma from a legally chartered medical college, in the office of the county clerk, in the county in which the party wished to practice. A similar law was in force in New York York and Pennsylvania, before the present laws were enacted, but in these States the diplomas of schools outside of their respective States, had to be indorsed by one of the medical colleges of that State. This provision exercised some control, but in New Jersey

there was no medical college, and as a necessary consequence, many diplomas of disreputable and fraudulent colleges were registered; in fact this stimulated the sale of diplomas, and the organization of fraudulent diploma-granting institutions. We noticed for several years the diplomas that were annually registered in the different counties of the State, and among them were found diplomas the possessors of which had been driven from other States. We were much struck one year by finding the diplomas of the so-called "American Health College of Cincinnati, in which was taught in six weeks the great vitapathic system of medicine." This institution was incorporated under the laws of Ohio, "authorizing the holder of a diploma to practice the vitapathic system of medicine, and conferring power to solemnize marriages, preach the gospel, and perform all other duties as a minister."

The long-felt want was, however, soon supplied, by the establishment of the Medical and Surgical College of New Jersey, at Jersey City in 1888, under a charter obtained from the Legislature of that State in 1870. The character of the College was exposed by the writer early in 1890, and soon after was temporarily closed by injunction of the Hudson County Medical Society, and on Nov. 11, 1890, the State Board of Medical Examiners took action toward securing the repeal of its charter, at the next session of the Legislature, in which they were successful.

The present law, when it was enacted, May 12, 1890, was undoubtedly one of the best, and with a few amendments would be all that could be desired in the way of legislation. It differs from the laws of other States in dividing "the applicants for examination into three classes," to-wit: 1, persons graduated from a legally chartered medical school, not less than five years before date of application for a license; 2, all other persons graduated from a legally chartered medical school; and 3, medical students taking a regular course of medical instruction, the examinations all differing.

The Secretary, in the Third Annual Report, says that the law rather acts by exclusion than by rejection; "this is proven by the fact that during our three years' existence, we have examined only 397 candidates, including the preliminaries, and those previously rejected, and issued only 307 certificates to practice medicine, which only equals the number registered each year under the old law." Among the applicants examined, there were some who had been before the Board six times. The Board is composed of nine physicians, three of them being homeopaths and one eclectic, and is therefore what is called a "Mixed Board," the same as Illinois, Iowa, Missouri, Minnesota, Oregon, Washington, Virginia and Ontario. The Secretary closes his First and Third Annual Reports as follows: "Yet each member will bear me witness when I say that we are a harmonious Board; we are there as nine men to see to it that the requirements of the laws are complied with; that the words 'school' or 'pathy,' are never mentioned in our deliberations; that we do not try to break down or build up any school, but we are determined that every physician who hereafter locates in New Jersey shall be an educated physician."

In 1892 the Board secured the passage of an "Act to Regulate the Practice of Midwifery," the first special legislation upon this subject in the United States. While it is true that Illinois, Iowa and Missouri under the general powers granted in the law creating these Boards, have taken the midwives under their supervision. This legislation was secured under the "belief that the health of a large number of the poorer classes, who employ midwives in confinement, should be and could be protected by securing better care of the lying-in women and their infants." The result has proven that the Board was right, and so far under this law 232 women have been licensed to practice as midwives. It means a decrease in all the ills and accidents incident to the lying-in chamber.

It is but just to call attention to the fact that all the benefits incident to this legislation have cost the State of New Jersey nothing, but that it has practically been carried on at the expense of the members of the Board. The fees received from candidates, after paying the stationery bills, printing, engraving and mailing certificates, printing laws, rules and regulations, and furnishing examination paper, etc., scarcely pay the traveling expenses of the Board, not to mention the loss sustained in their private business during their attendance upon the meetings of Board, and the time consumed while at home in the preparation of the questions for examination, and examining the answers to the same.

We understand that an effort will be made to secure amendments to the law, at this session of the Legislature, and it is to be hoped that provision will be made to relieve the burden of maintaining the Board from its members, and that they be properly compensated. It is not saying too much that a great deal that has been accomplished under these laws is owing to the efficient Secretary, DR. WM. PERRY WATSON.

THE LATE JOHN H. RAUCH, M.D.

The editor received a telegram on Saturday last, from DR. WM. GUILFORD of Lebanon, Pa., announcing that DR. RAUCH had been found dead in his bed that morning (March 24). Elsewhere we print his completed summary of the present smallpox epidemic in the United States; and a note from him written on Thursday stated that he would finish the article the next day. This article is therefore his last contribution to the literature of public hygiene. Since last

July, DR. RAUCH has edited the Public Health Department of this JOURNAL, and the leaders written on sanitary topics since that date, were most of them his production. Few men were better qualified to write with authority on sanitary subjects, and as a practical hygienist he had few superiors in any quarter of the globe.

The public park system of Chicago, the water supply, the drainage canal of the city, and a multitude of public works recommended by him, will perpetually remind the coming medical historian, that in this age lived a wonderfully energetic and capable sanitarian.

In the matter of higher medical education, no single man did more to elevate the standard than JOHN H. RAUCH. No one can doubt that it was almost solely due to the action of the Illinois Board of Health, under the Practice of Medicine Act suggested by him, that the medical colleges increased the length of their college terms, and required additional study as preliminary to graduation. The time was ripe for the movement. The AMERICAN MEDICAL ASSOCIATION had urged it repeatedly, and the general sentiment among medical men was tending toward higher medical education. The man to lead the work was found in DR. RAUCH, and within one year from the time the Illinois State Board gave public notice, the medical schools throughout the country had raised their admission standard, and lengthened their collegiate year. The movement thus started proved popular and still greater advances followed.

If few have had so great an opportunity, none have taken advantage of it as he did, to spring into leadership.

With the general acceptance of the four year system by the medical colleges, his work was finished, and he realized it. Worn and broken by the hardships of long and faithful service, and enfeebled by disease, he retired last autumn to his old home in Lebanon, for rest and recuperation.

His intense interest in everything relating to the AMERICAN MEDICAL ASSOCIATION, which organization he regarded as appealing in the strongest possible manner to the *esprit du corps* of the medical men of this country, led him to actively support this JOURNAL and too often work beyond his strength in its interest. As a member of the Board of Trustees, his advice was always conservative and useful. His place on the Board will not easily be filled.

CONSTRUCTION OF STATUTORY PROVISIONS FOR THE CARE OF INDIGENT SICK.

A statute providing for the care of the indigent sick, the Supreme Court of Idaho holds, in the case of Board of Commissioners v. MCFALL, decided Feb. 9, 1894, is one of mercy and benevolence, and must be liberally construed, with a view to carry into effect its beneficent objects and designs. The provisions of the Idaho statute, directing contracts to be made for the keeping of the indigent sick of a county, for a gross sum per year, the court holds are broad enough to include all such sick within the county. It does not require that they reside within the county any certain length of time, or that they possess any particular qualification, other than that of being indigent sick or otherwise dependent poor. A citizen of another State, who comes into this State and becomes sick, and is pecuniarily unable to provide for himself proper medical aid, attendance and support while so sick, comes within the purview of that statute. However, in a case of that kind it is the duty of the Board of County Commissioners to remove such sick person to the county or State of his residence as soon as practicable. One who has a contract for keeping all the indigent sick of a county, for a gross sum by the year, is not required to keep any who do not come within the terms of his contract. And he can not bind the county for the keeping and caring for any person who does not come within the provisions of the statute.

CHANGE OF OCCUPATION DOES NOT DISQUALIFY AN EXPERT WITNESS.

The competency of an alleged expert witness is a preliminary question of fact to be determined by the trial court, and its determination that the witness is competent will be generally regarded as conclusive, unless there is no evidence whatever, or no sufficient evidence, to support it, or the determination is contrary to the evidence. So says the General Term of the Court of Common Pleas of New York City and County, in its decision of the case of HAAS v. GREEN, rendered Feb. 5, 1894. That an expert witness has changed his employment, for example, has abandoned his studies as a chemist and devoted himself to the occupation of a druggist, vending drugs and toilet articles exclusively, this court further holds, does not render him any the less competent.

PUBLIC HEALTH.

The Smallpox Situation in the United States.

By JOHN H. RAUCH, M.D.

The following gives the smallpox status of the United States to March 17, obtained from official and reliable sources:

Two steamers have recently arrived with smallpox: One at the Delaware breakwater, from Rouen, France; and the other at Boston harbor from London. A young lady who arrived on the *Majestic* from Paris was taken sick after her arrival at Brattleboro Vt., and there was another case in Elk County, Pa.

No immigrants should be allowed to come to this country from Europe without being vaccinated before embarking, owing to the prevalence of smallpox in Europe.

The Health authorities should continue to press vaccination, as it will be found that the objections of many will be removed with the milder weather of the next three months.

With a more thorough sanitary investigation of the country than obtained twelve years ago, and the exclusion of unprotected immigrants, the epidemic should be stamped out by next December.

MASSACHUSETTS.—Dr. Abbott, the Secretary of the State Board of Health, reports under date of March 14, as follows:

Cases reported to the Board	October 1893,	3
" " " "	November, 1893,	8
" " " "	December, 1893,	19
" " " "	January, 1894,	25
" " " "	February, 1894,	27
" " " "	March 1 to March 14,	14
		—96

Of this number 68 were in Boston, 8 in Lowell, 5 in Holyoke, 4 in Worcester, 2 each in Somerville, Brookline and Methuen, and 1 each in Marlboro, Yarmouth, Lawrence, Waltham and Lynn. There were 13 deaths and all unvaccinated. Can not give the vaccinal statistics at this time. The following, however, for the previous eight years (1885 to 1892 inclusive), is worthy of note:

Number of deaths from smallpox reported to the Board,		28
" " cases of " " " "		124
" " deaths among the vaccinated,		3
" " cases " " "		50
Percentage,	6 per cent.	
" " deaths among the unvaccinated,		17
" " cases " " "		49
Percentage,	34.7 per cent.	
" " deaths among the doubtful or unknown (as to vaccination),		8
" " cases among the doubtful or unknown (as to vaccination),		25
Percentage,	32 per cent.	

The only points in the State where cases exist are Lawrence, Yarmouth, Lynn, Waltham, and Boston. At the four first named there is only one case, and there are now in Boston only 17. In the latter part of February a number of cases were found in South Boston, and as there seemed to be a tendency to spread, the Board of Health promptly organized a vaccinating corps of fourteen physicians, who made a house-to-house inspection, in the infected districts, vaccinating all who were not protected by recent vaccination, and at this time it may be said that the disease is under control. Vaccination is compulsory in Massachusetts.

CONNECTICUT.—In December, 1893, there were 7 cases in the town of Winchester. Of these 5 were treated as chickenpox; the 2 following cases were recognized as smallpox. In January, 10 other cases occurred in the town, and then it spread to the adjoining towns of Norfolk where there were 3 cases, and to Canaan where there was 1 case. On January 3, a case was reported in New Haven. No spread from the three last points, so far as known. In Waterbury, a case was found on February 17 and another on the 26th. Last week a man suffering from smallpox took a New York train at South Norwalk. Much consternation was created on the train, and upon arrival at New York, the patient was taken in charge by the health authorities.

NEW YORK.—Smallpox now exists at Red Hook, Tivoli, College Point, Walworth, Manchester, Ontario, Yonkers, Utica, and Sing Sing Penitentiary.

NEW YORK CITY.—Cases in Hospital January 1, 18; February 1, 40; March 1, 64; March 3, 56; March 10, 50; March 17, 43. Cases reported for the week ending January 6, 11; January 13, 11; January 20, 22; January 27, 22; February 3, 22; February 10, 23; February 17, 23; February 24, 29; March 3, 30; March 10, 28; March 17, 26, making a total from January 1, to March 17, of 239 cases. From the foregoing it will be seen that the New York Board of Health has held the disease in check under very difficult circumstances, and it now looks as if it was under control, and that the number of cases will continue to decrease.

BROOKLYN.—In January there were 70 cases of smallpox reported, February 65, and to March 17, 71, making a total of 206 since the beginning of the year. This increase is mainly owing to a nest of smallpox found on March 1, and perhaps to the demoralization of the Health Department incident to a change of administration. The Health Commissioner is acting energetically and on the 10th inst. established eight vaccinating stations, where the poor can be vaccinated free of charge. Others will be opened as soon as possible, and we have no doubt, with the other precautions taken, that about April 1 the disease will begin to decrease. There are now about 60 cases in the city. There has been a slight increase during March in infected points throughout the State.

NEW JERSEY.—There is 1 case at Hoboken, and 3 at Jersey City, and several convalescents in the Hudson County pest house. In 1893 there were many cases in the State.

PENNSYLVANIA.—Since January 1, 1894, smallpox has existed and been found at the following places: Reading, Fritztown and West Leesport, Berks County; Mechanicsburg and Carlisle, Cumberland County; Oakdale, Allegheny County; Jeannette, Westmoreland County; Pittsburg, Tyrone Forges, Philadelphia, Pottstown, Bedford County; Williamsport, Wilkinsburg, Alleghany County; Shamokin. (An Italian direct from ship at New York died at Dagus Mines, Elk County) Riverside, near Danville, Danville, Jersey Town, near Danville, Mohn's Store, Berks County, and Pottsville.

Smallpox is now at Pittsburg (has been stamped out twice here in the last four months), Shamokin, Riverside, Danville, Jersey Town, Mohn's Store, Berks County, Maconaqua, Pottsville and Philadelphia. About a month ago a man died at Danville from what was called purpura hemorrhagica and chickenpox; soon after a case of smallpox occurred at Shamokin and then at Riverside. In both these cases the disease was traced to Danville. A bitter controversy ensued, but the State Board of Health very properly directed the Danville Board of Health to treat all cases of so-called chickenpox as smallpox, and on March 16 there were under treatment there, smallpox, 2 cases; varioloid, 3 cases; chickenpox, 10 cases. The case at Pottsville is traced to Danville.

A very disgraceful performance occurred during the week in which a smallpox case was compelled to walk forty-two miles before he was taken care of. How many cases will result from this case can not be told. There are now 27 cases in the State, a less number than at any time for the last six months. The vaccination of the public schools is progressing very satisfactorily.

PHILADELPHIA.—The Board of Health of this city at this time has a good smallpox record. In 1893, there were 43 cases reported and 5 deaths. There have been 3 cases since January 1, 2 importations from Connecticut and 1 from New York. There is only 1 case there now. Repeated introductions of the disease have occurred and it has been repeatedly stamped out. The President of the Board is fully warranted in his annual report in saying: "The comparative freedom of the city from the disease notwithstanding its prevalence in a number of places in Pennsylvania and adjoining cities, shows that among other things a most careful supervision and prompt application of prophylactic measures in all first cases and vaccination was successfully resorted to. There were twenty-four centers from which the disease might have spread, but notwithstanding this fact, the entire number of cases was only 13."

The steamship, *Erivan*, from Rouen, France, arrived at the Delaware breakwater, March 3 with two of her crew suffering from smallpox.

OHIO.—Since February 1, smallpox has been reported at Springfield, Toledo, Columbus, Lima, Dayton, and Worthington. The Columbus case was two days in the General Hospital before character of disease was discovered, and the last week another case was found at that place. Since the first case was reported at Toledo three more have been found but no connection can be traced to the first case. Owing to the fact that a severe outbreak occurred in the State early in 1893, (introduced by immigrants) which resulted in the vaccinal protection of many, and the energetic efforts of the State Board of Health for the last four months, in pushing vaccination, it is believed that the disease will be prevented from spreading to a great extent. There are now in the State five points of infection and 8 cases.

ILLINOIS—From October to March 8, there were outside of Chicago 5 cases in Mascoutah Township, Clinton County; Hull's, Pike County, 1; Cotton Hill Township, Sangamon County, 1; Manhattan, Will County, 1; Round Grove Township, Livingston County, 1; Joliet, 4; Peoria, 2; Spencer Station, Will County, 2; Jonesboro, 1; Edwards County, 15, all in county poorhouse. Of these there still remain at Joliet, 3; Jonesboro, 1; Edwardsville, 15, and at Spencer Station 1, making 20 in all, a good record taking everything into consideration. It is said that only 5 cases occurred among the laborers on the Drainage Canal.

CHICAGO.—In December, 66 cases were reported; January, 180; February, 243; and to March, 17, 155, making a total of 578 since the beginning of the year. There are now in Hospital 153 cases. It will be seen that since January 1 there has been a very rapid increase, and that there are now in Chicago over one-third of all the cases in the United States. The conditions that obtain are peculiar, and while more

public vaccinations have been performed than in any other city in the United States, and a great deal of very excellent work done, the number of cases still continue to increase.

We are pleased to note that the clergy are interesting themselves in vaccination and through their assistance, whole congregations are being vaccinated; also that a house-to-house inspection is being inaugurated, and we have no doubt much good will be accomplished. With the elevation of temperature, the number of cases will begin to decrease.

The epidemic commencing in 1853, continued nearly through 1855, and was kept up by immigrants. We had another commencing in 1863, and continued to the end of June 1865. During this time immigration revived, and contributed to the keeping up of the disease, although some share of the cases were contributed from the large number of soldiers and prisoners of war at Camp Douglas. In 1871 smallpox was brought here a few days after the fire by immigrants, and in 1872 there was a marked increase of both foreign and domestic immigration into Chicago, attracted by the rebuilding of the city. This epidemic commenced in October 1871, and continued until May 1874. The next, commenced December, 1879, through an immigrant, and continued to the end of 1882.

After smallpox has obtained a foothold in a large city, it can only be stamped out by securing the vaccinal protection of all that may be liable to contract the disease, as no one can tell when they will come within the influence of the contagion.

WISCONSIN.—Under date of March 9, Dr. J. T. Reeve, Secretary of the State Board of Health reports as follows:

"Until January 20, last, our State had been almost entirely free from smallpox for years. On that date a case was reported from Milwaukee in the person of a little girl. The origin was not discovered. Very strict precautions were taken and the disease was confined to this case.

On January 27, the disease appeared in a prisoner in the county jail at Janesville. It was confined to the original case which proved fatal. Since that date it has appeared in the jails at the following named places, in the order and to the extent named, to-wit: Juneau, January 31, one case recovered; Sheboygan, February 1, one case, recovered; Portage, February 12, one case, recovered; Madison, February 14, one case, died; Jefferson, February 14, one case, followed February 21, by a second case; Waukesha, February 20, two cases, died; Elkhorn, February 23, one case. Several of these cases were in the persons of tramps arrested for vagrancy or crime, and some facts lead to the belief that the cases were closely connected in their origin. For example, the case appearing in the jail at Elkhorn, reported to this office February 23, the prisoner spent the night of February 8, in the jail at Jefferson from which smallpox was reported on the 14th.

The disease has also appeared in tramps in the following places, the tramps being at large at the time of their coming down with the disease: February 3, a report was received from Waukesha that a tramp was caught upon the street suffering with smallpox. He was confined to the pest house, and recovered. February 10, a tramp came to the police station at Fort Howard complaining of being sick. The Health Officer was called, and not diagnosing the case as smallpox sent the man to the Sanitarium of which he is the proprietor. It was soon manifest that he had the smallpox, but not until others had been exposed, and subsequently four inmates of the Sanitarium were stricken with the disease. The original case died; a second death followed. One of the attending physicians in these cases carried the disease to his seven weeks old babe. He then with wife and babe entered the Sanitarium. The child died, making six cases occurring at this institution with three deaths.

February 14, a case was reported from DePere. A girl working in the rag room of a paper mill—one case followed from exposure to the first case. March 4, another case was reported from DePere, a man employed in a paper-mill—apparently there was no connection with the former cases.

February 19, a case was reported from Camp Lake, Kenosha County, in the person of a laborer who came from Chicago the week previous. No cases followed.

February 22, a girl working in a paper-mill at Menasha was reported as having smallpox—the origin was supposed to be from the rags; the girl died. No cases followed.

Beloit reported February 24, a case in the person of a hotel girl—origin very doubtful. One case followed.

March 2 a case was reported from Lewisburg, Grant County. No additional cases reported.

On March 8, the last case reported, was at Neenah, in the person of an infant six months old. No probable source of origin yet discovered, but some of the family had recently been traveling.

The cases outlined above make a total of 27, with 8 deaths, reported from 16 distinct communities. In all cases (with possibly one exception) the local Boards of Health and Health Officers were prompt and thoroughly effective in adopting stringent measures of quarantine, and the recommendation of general vaccination issued by the State Board of Health early in January, together with the rule of the Board requiring vaccination as a pre-requisite to admission to school, published January 31, caused vaccination to be very generally carried out throughout the State. There has since been reported a suspicious case at Milwaukee. This is a very instructive and interesting report.

MICHIGAN.—Dr. Baker, under date of March 16, says that since Jan. 1, 1894, there have been four jurisdictions in Michigan infected with smallpox. Otsego village 4 cases; Otsego township 2 cases; Menominee 4 cases; and Crystal Falls 1 case. In all 11 cases, and 3 deaths with no spread so far from the original cases. There are now in the State 4 cases. The vaccinal status of the State is good, and the sanitary organization of the State excellent.

IOWA.—Within the last four weeks Iowa had 7 points of infection, and in no instance did the disease spread beyond the first cases, all being importations from Chicago; smallpox now exists only at Tama City, where there is one case. This is a remarkably good record, and reflects great credit upon the local and State health authorities. Vaccination in spite of opposition has been very general.

MINNESOTA has had but one case, and there is no smallpox in that State now. The vaccinal protection of the State is very good, and with its complete and efficient health organization there is not much danger of the disease, if introduced, of spreading.

KENTUCKY.—Dr. McCormack says that we have only had 14 cases of smallpox in this State, during the present epidemic, 16 in Louisville, and 4 in Paducah. The disease was promptly stamped out in both cities.

INDIANA—There is at this time a case at South Bend, and 2 at Crown Point; both contracted the disease at Chicago. So far there has been no spread from the original number. The prevalence of the disease at Muncie, and other points in this State during the past summer, resulted in pretty general vaccination, and the State, generally speaking, is well protected from a vaccinal standpoint. The State Board of Health is, however, pushing vaccination, lest the disease obtain another foothold.

WEST VIRGINIA.—Last fall the disease appeared at Bridgeport, Harrison County, in the person of a young girl just returned from Chicago; six cases of varioloid developed from this case, but the disease was completely suppressed before Jan. 1, 1894. In November, 1893, smallpox was discovered in the town of Lewisburg, Greenbrier County. Three men contracted the disease from the first case, and from these after Jan. 1, 1894, 12 cases occurred, nearly all mild varioloid. The disease then disappeared.

VIRGINIA.—Since Dec. 1, 1893, there were 13 cases in Lunenburg County, 15 in Southwest Virginia, and 20 at Shendon near Luray. There is now only one case in the State.

MISSOURI.—Only three cases were sent to the hospital at St. Louis in eighteen months. One in January, and the others in February. They belonged to the tramp class of wanderers, and drifted here from other places. One unvaccinated patient died of confluent smallpox, the others recovered and the hospital is now closed. No cases have occurred throughout the State of Missouri. Dr. Homan, Health Commissioner, says: "Public vaccination has been practiced in St. Louis more diligently during the past six months than ever before, and this may account to some extent for the immunity enjoyed."

GEORGIA.—There are 5 cases of smallpox at Senoia and 1 case of smallpox and 4 of varioloid at Atlanta. Source of infection, Senoia. The Atlanta cases were thought to be chickenpox.

TENNESSEE.—Dr. J. D. Plunkett, under date of March 17, reports that since Nov. 7, 1893, there are 81 cases of smallpox in Tennessee. There are now in the State at Knoxville 4 cases, Chattanooga 2 and Nashville 2.

ONTARIO.—One case near Burgessville, Oxford County. Origin, Chicago.

There are now in Massachusetts 21 cases; of these 17 are in Boston. Connecticut 2; New York 123, distributed as follows: New York City 43, Brooklyn 60, and 20 cases throughout the State. New Jersey 4 cases; Pennsylvania 29, 12 of these being in Philadelphia. Ohio 7 cases, Indiana

3, Illinois 168 cases; of these there 15 in the State and 153 in Chicago. Wisconsin 10 cases, Michigan 4, Iowa 1, Virginia 1, Georgia 10, Vermont 1, and Tennessee 8 cases. Total in the United States 389 cases and less than there were on March 1.

From the foregoing, it will be seen that the effort of the health authorities, taken as a whole, have been successful, if not in stamping out the disease, in controlling it, as the only places where there is an increase are Chicago and Brooklyn.

A Petition to Establish a Department and a Secretary of Public Health.

To the Honorable the President of the Senate and the Speaker of the House of Representatives of the Congress of the United States of America.

The AMERICAN MEDICAL ASSOCIATION at its meeting at Washington in May, 1891, adopted unanimously this resolution:

"*Resolved*, That the President of the ASSOCIATION, W. T. Briggs of Tennessee, appoint a Committee to memorialize the next Congress to create a Department and a Secretary of Public Health."

At the meeting of the Fifty-second Congress in December, 1891, a petition and a bill to that effect were introduced in both Houses; in the Senate by the Hon. John Sherman and in the House by the Hon. John A. Caldwell, and they were referred to certain committees. No report has ever been made to either House on the subject.

At the annual meeting of said ASSOCIATION in the City of Detroit in June, 1892, the Committee reported the failure to secure any action of Congress on the petition; whereupon the ASSOCIATION again directed the select committee to renew its appeal for Congressional action; but no notice was taken of it, chiefly because the alarm at the approach of cholera from Europe led Congress at once to enlarge the existing quarantine system which it was supposed would answer all purposes.

The Chairman of the Committee addressed a communication to the Chairman of the Committee on Contagious Diseases in the Senate, which set forth that while the quarantine measures were very effective so far as the hindrance to transplanting the diseases of other lands was concerned; yet they did not include all the measures for the operation of preventive medicine which the AMERICAN MEDICAL ASSOCIATION was seeking to establish for the public welfare.

The only answer made at any time by this gentleman was merely verbal, and that it was his belief that Congress would not appropriate money that would increase public expenditure.

At the annual session in Milwaukee in June, 1893, these facts were reported, and the Special Committee was ordered to renew the appeal at the approaching Fifty-third Congress. Under this authority the undersigned beg your consideration of the whole subject anew.

In the Pan-American Medical Congress, which met in Washington in September, 1893, under the auspices of our Government, the most august assembly of medical men that ever met in this hemisphere, this question was carefully discussed and unanimously approved. Moreover, a large number of State Boards of Health, the National Board of Public Health and numerous medical societies in different cities and States have given their adhesion to this movement.

The AMERICAN MEDICAL ASSOCIATION is constituted of men of distinction in every part of the Union. For more than forty years its sessions have been held in the chief cities of the States lying between the Atlantic and Pacific coasts, and it represents nearly one hundred thousand intelligent and well-known citizens. The annual sessions have greatly promoted scientific research into the causes and treatment of diseases of every character, the formation of State Boards of Health, higher medical education and the publication of treatises on preventive medicine and medical practice, which form a continuous line of medical progress in the last half of this century.

The Government, through the operations of the Surgeons-General of the Army, Navy and Marine Hospital service has made liberal expenditures for the National Medical Library and its Index Catalogue, a Pathological Museum and some investigations on the origin, nature and spread of the fearful infectious germs that are brought to us by immigrant and other ships. But the medical profession believes that the Government can, in a wider way, promote the public welfare by creating a Department of Public Health, the head of which should be a physician, a member of the Cabinet and on a parity with the heads of the Departments of War, Navy, Finance, Justice, Agriculture, etc. A fair investigation will show that no profession excels ours in positive efficiency to sustain public order, public comfort and public virtue.

Hygienic science, on the one hand, and the progress of the sciences and growth of the mind, on the other, have always been powerful factors in the evolution of humanity. In the first century, when Rome had reached her apogee in power and civilization, and had constructed great aqueducts, public fountains, public latrines, gymnasiæ and a vast system of sewers, under the suggestions of physicians, Martial said that it was not merely a question of living, for the people, but to have good health; hence the maxim that has come down to us: "The health of the people is the supreme law."

Recently, the Lord Chancellor of England appointed Sir James Crichton Browne, M.D., L.L.D., as his visitor to make certain investigations in regard to the public health, and of the influence of certain employments upon the health and comfort of the laboring classes. We can only give a partial exhibit of his observations. He found, that while the decline in the death rate at all ages had been, within a certain period, 17.5 per cent. in those under 55 years of age, it had been reduced only 2.7 per cent. in those above 50 years old. The increased longevity has occurred under the age of 35. The decline in the death rate beyond the age of 45 had been insignificant, but from 65 to 75, the death rate was increased. He adds that it is not satisfactory to learn that while there has been enormous increase in the duration of life in babies and young people, the loss is alarming among those who are eminent in experience and judgment. The causes of this vital failure in the mature element of society was not difficult to find by his statistical studies. In three or four groups of diseases a marked increase in mortality has taken place; thus, in England and Wales, cancer in five years, from 1859 to 1863, carried off 35,654, while in five years from 1884 to 1889, the deaths by cancer were 81,620, an increase of 120 per cent. The increase in deaths by nervous diseases in the same period was 38 per cent.; in kidney diseases for the same period the increase in deaths was 164 per cent.; in heart diseases, the increase was 143 per cent. These affections, he continues, are of degenerative character and may largely be traced to vital abuse, overstrain and the increasing luxuriousness in our advancing civilization which establish premature senility. Moreover, the large increase in insanity is causing solicitude everywhere. It can not be questioned that this fearful increase in bodily and mental decay should be well understood by and placed before the people. There is another phase of this question of premature decay of great interest and it concerns a burning question of the day. Sir James says, that owing to the strain and drive in many manufactories where handicraft piecework prevails, the neuro-muscular systems of the shoulder, arm and hand which on the average attain maturity at 30 years, and should continue as much longer, begin to fail at 45 years, and while at 30 a man can earn 45 shillings a week, at 45, strive as he may, he can not earn over 38 shillings, and at 55 his earnings fall to 24 shillings, owing to the premature decay of the motor apparatus from overwork. In Sheffield he found that penknife makers aged 30 years, strike 28,000 blows a day with a hammer, but at 45, they find their celerity and skill have declined to nearly one-half, and a reduction in wages to the same extent ensues.

As we have no national office for the collection of such statistics, except perhaps the Bureau of Labor in a partial way, we must rely upon those furnished by other nations.

The telegraph operators, everywhere, sooner or later become the victims of scrivener's palsy of the fore-arm and fingers on account of the excessive use they are obliged to make of them, for, as their celerity fails their wages decline. The mail clerks on railroad trains are required to work many hours more than in other Government offices, and are besides compelled to memorize, with all the certainty of the multiplication table, the locality of eight to ten thousand postoffices in the vast districts of the country. The effect in numerous cases of this excessive use of the memory is insomnia and a mild form of dementia. It is, certainly, a function of statesmanship to investigate these serious evils. The Government has begun to investigate the exposure of employes on railroads who are often wounded and killed in the coupling of cars; and the investigation of the desperate use of young people in the "sweat shops" of clothing establishments has created a great outcry for their relief.

"In 1848 the Public Health bills in England went into operation. The annual death-rate which up to that time

was 22.5 per thousand diminished to 17.9 per thousand within twenty years; showing a saving in that time of 125,000 lives. The effect of hygienic measures in preventing sickness is well known in the State of Michigan. During the year 1889 there were 417 outbreaks of scarlet fever. In seventy-two of these outbreaks, isolation and disinfection were neglected and the number of cases, per outbreak, was 16.78 per cent. In fifty-two outbreaks, both isolation and disinfection were strictly enforced with the result of limiting the number of cases to 2.67 per cent. In many outbreaks only one restrictive measure was used and the other neglected, and in all such cases there was some reduction in cases, but never to the same extent as when both were enforced." (Dr. J. W. Brannan, *New York Medical Record.*)

Our census of 1890 shows that 524,000 deaths occurred in that year, and that 100,000 were from consumption. It is estimated that about one-half the whole number was due to diseases that could have been prevented.

It is now becoming generally known that infectious diseases and toxic elements are disseminated in food. An infectious disease in the family of a dairyman, or among his cattle, may be as widely spread as is the distribution of his milk. The pollution of streams supplying towns, cities, and wells of water at farmers' homes, we know, definitely, subject the people to tedious and fatal diseases which a wise sanitation would prevent. It is absolutely demonstrated that by the rigid application of hygienic measures the ravages of a pestilence may be stayed. Medical scientists speak of such destruction as a self-imposed curse of dying in the prime of life.

In primitive history we find that hygeia and therapy were the conservative and remedial agencies of afflicted peoples. We read with admiration of the wisdom which made sanitary measures a part of the religious codes of a nation. The hygienic laws of Moses, which undoubtedly embody fragments of his Egyptian training both as a physician and a priest, and the moral law, the Ten Commandments, received from the hand of God, have been kept together by the Jews in their sacred books and inculcated in their religious and social rites for thousands of years, which clearly accounts for their existence, physically and mentally, as one of the most vigorous races among the multitudes of the earth.

Physicians are held to be the guardians of the organs that concur for the maintenance of a healthy animal life, but it is not so generally understood that the great brain, the physical basis of the mind, is just as much an organ of their conservative regard; it is not so well known that the healthy brain is necessary to a free will—the function that places man in his supreme condition as master of created things.

The increased light which physiology and pathology have shed upon the relations of the brain and mind, has enabled us to locate the area in the brain where exists the capacity to think, where sensations are shaped into concepts, where ideas are symbolized in language, where memory holds its seat, the imagination displays its marvellous powers, and self-control is enthroned. All of the apparatus of our mere animal life—respiration, circulation of the blood, digestion and assimilation of food, excretions of waste tissues and the actions of the nervous and muscular systems are to maintain and develop in perfect health an area which we can cover with our two hands. It is the region of self-consciousness, the plane where spirit and matter are in impact and which enables a man to say: "I know that I know, I feel that I feel, I think that I think;" it is there, indeed, that consciousness feels itself to be coterminate with the cosmos. Who but the physician has the right to supervise this dread region? Closer than the minister of religion, or the rights of family, he stands as the guardian and interpreter of its illimitable faculties.

By prolonged physiologic and pathologic research, psychology has been lifted above the mere subtle reason of the schoolmen into the light of a new day, and is now comprehended as never before. Metaphysics is no longer a mere jugglery with words and phrases, but a function of consciousness only existing in the healthy area above described; it is the highest expression of reason, whereby the intuitional phenomena of thought and the phenomena derived from the senses, the ideal and the real, the subject and the object, the me and the not me, are brought by a free will into accord and the consciousness is freed from the baleful illusions, hallucinations and delusions which exist in the insane. The imperfect state of consciousness in unsound sleep, illustrates a mental state wherein ideas flow freely, regulated only by automatic association; we are led everywhere by the most grotesque and often fearful ideation, without any self-control; the metaphysical function is in abeyance; there is no metaphysics in dreams, the consciousness is on too low a plane for any exercise of the will. This argument is legitimate and should be convincing, that medical men hold an indispensable relation to the social and political state.

All abuses of the appetite in any direction, all violence done to the brain by overwork, overstrain, the excitement of narcotics, and the delirious speculative ventures in the values of stocks and of the products of the crops; everything, indeed, that keeps up, unduly, mental excitement, deteriorates at length the organic structure of the brain, enfeebles the mind in judgment on any subject; in short, a condition of dementia supervenes. It is for the physician to warn teachers of the deleterious effects of overtasking scholars; to warn people against luxuriousness, indolence, and the habitual use of stimulants, and excess in any passion or appetite; for, while the organs of mere animal life are damaged the nutrition of the brain is changed, the will becomes so impaired that self-control is lost. It is appalling to contemplate the social destruction about us on account of the prevalence of the passions of avarice, peculation and lust which so greatly defile public virtue. These are evils the indulgence of which has ruined statesmen and empires. Luxury and vice in combination form the dynamite in the moral world.

The medical supervision should begin in the primary and intermediate schools, which are frequently in overcrowded, ill-lighted and ill-ventilated rooms; this has become so serious that in Germany, at least, it has brought about State interference, and physicians must be consulted in regard to the hygienic properties of a schoolhouse. The physical structure of the eye is most liable to evil changes, leading to shortsightedness; and the organic life of the brain substance is exposed to deterioration leading to lowering of the intellectual faculties. In the technological schools of France the use of tobacco is forbidden, because it has been ascertained that its abuse renders the student incapable of solving the highest problems in mathematics. It is also of great importance that the methods of teaching should not involve an excessive abuse of the memory—the *memoriter* plan. This it is thought is too greatly employed in American schools, but it seems to be a necessity so long as the rank of a pupil in his class depends upon the rate per cent. of correct answers. The abuse of the memory fatigues the brain as physicians well know, and impairs the power of the free will. Lessons are memorized, and not acquired by efforts of the understanding, hence they are not well retained and furnish a poor basis for intellectual ability. Not only so, but the emotional conditions so often encountered, and the startling phenomena of hysteria and hypnotism are thus often superinduced. There are no fortuitous conditions that concur for the production of the best moral and political circumstances of society; the whole is purposive intelligence existing in the individual and combined in the exigencies of the family and the State. Wherever the highest development of physical health exists, there will be found the surest basis of intellectual life. These are not abstract questions of philosophy but are the most practical questions of our times.

A candid and broad investigation of the medical profession shows that it appertains to the most important functions in the commonwealth. A distinguished English writer has said: "I think it will be well for the state when the medical profession is represented in the councils of the nation as weightily as can be assured by official places and conferred dignities." An eminent German economist has said: "We must look to the medical men to resuscitate society." There are no evils in society which physicians may not do much to avert; there are no foes of human happiness so widespread, miserable and despairing as those which underlie public health; and physicians are the only hope of public relief.

It is certainly a remarkable spectacle, the constant efforts of physicians to save the people from outbreaks of disease, when success will limit to the smallest dimensions our practice and incomes. But this arises from the nature of our studies whose tendencies are to render an unselfish service to humanity in the time of its calamities. The physician is bound to render service to the poor, especially. The amount of gratuitous service in great cities is a very large part of their practice. In all of our public general hospitals they serve without salaries.

If there were cruelties to prisoners on either side in our civil war, it was not perpetrated by the surgeons of the opposing armies. When the strife ceased they were the first to extend the fraternal hand across the red fields of conflict.

The progress of medical science establishes our increasing responsibility to place our medical schools on the highest plane of teaching. There is a very large aspect of medicine that renders it so commonplace as practically to degrade it, and this is a consideration that will be a great obstacle in the way to your adoption of our bill. I allude to the giving of drugs by everybody for the relief of symptoms of disease. It may be said all the people, young and old, not only offer general advice but specify the remedies to be used. If medicine has no other basis than prescribing, it would possess no autonomy, embody no science, nor philosophic spirit; it would only become an unstable empiricism and would be abandoned to a revolting charlatanism and its practitioners be mere vendors of secret, false remedies, and, as is now so largely done, would rob the sick not only of their money but of any hope of relief.

The human frame is said to be the Divine idea of mechanism, and nothing in all the works of creation so completely illustrates in its structure what is called by geometers the "principle of least action," that is, the greatest competency in function, with the least expenditure of material. Its figure, symmetry, mechanical, physical, chemical and biological forces are so correlated that it fulfills all the conditions of adjusting internal to external relations. Its organs of special sense, its area of consciousness wherein it is the equipoise of the physical creation, justifies the ascription that man is the crown and flower of creation. Can any one doubt that it is only by a long and minute study that such an organism can be comprehended? Congress appropriates annually more than a million of dollars for the maintenance of military and naval schools, where the whole range of sciences are inculcated to ascertain the most approved methods of public defense and of killing our enemies. Can it be thought that any less science is needed to ascertain how to destroy myriads of enemies that provoke disease, and all the more terrible because invisible to common sight; and to save from death the most precious objects of human love and solicitude? Are there more scientific problems for solution in war by sea, or land, than those that exist in the grievances of our social life?

But we are not asking Congress to build a great medical school of instruction. Congress appropriates willingly large sums for the study of the diseases of cattle and plants, but comparatively nothing for the diseases of the people. But we show you that 522,000 inhabitants died in 1890, and that 250,000 of them at least, have perished by diseases which are preventable!

We ask for a Governmental Department of Public Health; one of whose functions would be the combination of the intelligence, feeling and force of all the schools and medical societies of the nation for collective investigation in order that physicians may become capable to the utmost, to relieve the woe and agony of suffering in individuals and families.

For the medical profession to be able to exert all its benign influences in society, it must have the same rank and dignity that is attached to other Departments in the President's Cabinet. The methods of research are the same as those employed by other scientists. The methods of the calculus that are employed to ascertain the cause of the perturbations of celestial bodies, are the same as those employed in the investigation of obscure diseases. The physician is guided in his investigations by the canons of logic, and hence it is that the opinions of well-trained doctors are as reliable and stable as those of jurists, statesmen, engineers, merchants, divines, lawyers and political economists. The same reproach applied to doctors because of their different opinions, applies equally well to all other callings.

At this time the success in medical practice surpasses any other period of its history. The death rate in our general hospitals was never as low. In surgery it is about 3 per cent.; thousands of successive births take place in maternity hospitals, without a single death; the mortality in typhoid fever is about 3 per cent. in hospital practice; in general medicine the rate is declining; but it is not as low as in surgery because of the increasing mortality, as before said, in such diseases as consumption, cancer, kidney, heart affections, and the continued bad hygienic conditions in the congested areas of our large cities, where one-half the children die under five years of age. (Cincinnati Hospital Report, 1893).

The influence of medical culture upon the progress of civilization as before said, both in ancient and modern times forms a great chapter in human history. The evolution of the mind and the achievements in philosophy are no more marvellous than what is seen in preventive and clinical medicine. The chief figure in the most brilliant era of Greek civilization was Aristotle. He was of the Esculapian caste and took up the profession of his father, a practitioner of medicine; but his constant dissection of animals and plants aroused a philosophic spirit of seeking behind all the phenomena of nature by synthetic formula, the unity of all living beings and their indissoluble relation to the cosmos. We can not, in our space, point out all the achievements of his immense genius nor his specific work in detail that entered into his purpose of constructing the edifice of inductive philosophy. Mere fragments of his precious writings were the only intellectual food (excluding the canon of sacred Scripture and the liturgies of the Church) of the Dark Ages; but when at last the chief of his philosophic works were collected and translated into Latin, the dawn of the revival flushed the skies and the sun of a new mental life shone in full strength upon the scholastic world,—the church adopted his philosophy and the renaissance was complete. The influence of Aristotle has continued to direct modern thought, and though much of it has been laid aside, his inductive philosophy and logical methods are invincible.

In Europe, medical affairs have always had the watchful care of the state, and eminent practitioners are now more than ever before, receiving titles of distinction. In Italy a physician holds a Cabinet Secretaryship, and in the Parliaments, everywhere, distinguished practitioners are taking part in general statesmanship. Without the science of medicine, civilization could never be effective in semi-civilized and barbarous lands.

The conquest of India by Great Britain has been maintained by superior military power; but its present tranquillity is largely due to the beneficent work of medical practice. Since the last great rebellion there, the English and missionary societies of our own country have established fifteen hundred hospitals and dispensaries, and medical schools are increasing in numbers. The light of Christian benevolence is now carried into the hitherto closed doors of the homes of the people. In China the same benign work has taken deep root. Fifty years ago Dr. Parker of the American Presbyterian Church, opened a hospital in Canton, and an immense work has been accomplished in surgical and midwifery practice, for which the Chinese had no remedies at all. Now a large number of hospitals and dispensaries have been planted along the sea coasts and throughout the interior. Besides male, a large number of well-educated female practitioners, are employed in them. It is the most touching spectacle of human sympathy and relief the world has ever known. Were it not for their skill in medicine the American missionaries would be expelled. Japan, Korea, Java and Africa, are being advanced in civilization in the same manner. Dr. Mungo Park and Dr. David Livingston were the most venturous explorers of Africa.

It is the belief of many physicians that if from the beginning of the settlements in this continent the medical office had been recognized as a Department of the State, on a parity with those of War, Justice and the rest, the great tribes of savage races could have been made friendly, and allies, and brought under the terms of a high civilization by the humane influence of our medical men.

Though Congress is voting vast sums for agricultural schools and experimental stations, yet these are above the reach of the great mass of farmers and their adult sons and daughters. They can not leave the fields and the household duties for at least nine months of the year, and they can not pay the expenses incident to college life; but schools of instruction, by means of lectures, demonstrations, drawings and experiments in physics, chemistry, and the structures and the functions of the chief organs of animals and plants, can be readily inculcated by the doctors in medicine who have themselves been taught in this manner. These lectures can be given by physicians during the winter seasons in the towns of the counties and within reach of the farmers' homes, and a central office, such as we propose, would aim to promote this without expense to the Government.

It will be the means of putting new life into the freshest and strongest minds of the people. Every farm would soon become an experimental station; Nature would be seen with new eyes, and the dull and monotonous lives of this most neglected class would become radiant with a new light. This may be counted one of the great influences that will follow the higher education of physicians.

The question may arise, whether such a Department in the Government would subserve the interests of any particular sect or school in medicine? We reply that, amid the apparent disparity in medical practice, there is one true unity and to attain this all true physicians are continually striving. It is evident that there can be but one anatomy, physiology, pathology, chemistry, physics or preventive

medicine. The difference among doctors lies in therapeutics or treatment of disease, and as in the past, so for the future, practitioners will use a variety of remedies and in varying quantities, and there will be different modes of management of sick and injured people. With the advance in medical education the modes of treatment will become more unified.

The organism which is called medicine, like every other product of man's constructive genius, is striving to attain perfection, and to accomplish this it must be sustained in all its scientific undertakings by the coöperation of national and state legislation.

We ask each member of Congress, who seeks relief for himself and his family in the times of their distress through the most accomplished practitioners of medicine, to consider that his mind is the type of that of millions who constitute the republic; and therefore we ask him to lend his influence to our effort to secure for the people the most highly trained persons in the science and art of medicine.

We hope that it is plain that a Secretary of Public Health would represent the medical consciousness of the nation, and that he would be one to whom we could all look for the exploitation of measures that will direct continuous scientific collective research in regard to epidemic and endemic diseases, and especially those of a degenerative character; and thus make his department the repository of the most important measures that concern the welfare and comfort of the people; and his duties will steadily grow broader and stronger in adaptability to public needs.

Respectfully submitted on the part of the Committee.

C. G. Comegys, Chairman.

A Bill to Establish a Department of Public Health.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

Section 1. That there shall be established a Department of Public Health. There shall be appointed by the President from the medical profession, by and with the advice and consent of the Senate, a Secretary of Public Health, who shall be entrusted with the management of the department herein established. He shall be paid an annual salary of $8,000.

There shall be appointed by the President, with the approval of the Senate, an Assistant Secretary of Public Health, at an annual salary of $5,000.

The Secretary of Public Health shall, with the approval of the President, provide suitable offices for the department, and shall employ such assistants and clerks as may be necessary.

Sec. 2. It shall be the duty of the Secretary of Public Health to obtain through all accessible sources, including State boards of health, municipal authorities, and the Surgeon-Generals of the Army, Navy and Marine Hospital Service of the United States, weekly reports of the sanitary condition of all ports and places within their territories and departments, and he shall publish weekly abstracts of the information thus obtained and other pertinent matters received by his department. The said department also shall, as far as possible, by means of the voluntary coöperation of State and municipal authorities, of various general and special hospitals, sanitariums, public associations and private persons, procure and tabulate statistics of marriage, births (noting those that are illegitimate), and deaths from epidemic, endemic and all other diseases, specifying those of a degenerative character such as malignant growths, and affections of the nervous, circulatory, respiratory, secretory, digestive and reproductive organs, and from violence, accidents, suicide, murder, and data concerning the fruit of consanguineous marriages and the transmissibility of insane, alcoholic, syphilitic, nervous and malignant types of constitution to offspring, and to evils of race miscegnation. He shall also procure information relating to climatic and other conditions beneficial to health, and especially in reference to the most favorable regions in the United States for the cure of pulmonic chronic diseases, particularly tubercular consumption. He shall also procure information as to the prevalence and ruinous effects upon the body and mind of intemperance and prostitution. He shall endeavor to ascertain the extent, the origin and classification of insanity in the several States and territories of the country. He shall investigate the state of comfort of the laboring classes in respect to their lodgment, their trades, occupations, the healthfulness of their workshops and the contents of the atmosphere they habitually breathe, and the prevalence of premature degeneration of the nervous and muscular systems by the exactions of piece-work employment. He shall obtain information in regard to the soundness of their food and purity of water supply. He shall ascertain the ages at which the children of the poor are put to work, and its hindrance to their physical development, and their lack of common-school education. He shall seek through the State boards of health, information of the hygienic state of public school buildings respecting their illumination, ventilation, and presence of noxious elements in the circumambient air. He shall seek information in regard to the pollution of streams and navigable waters and public and private wells. He shall attempt, through the coöperation of the authorized medical schools in all the States, to promote the most extended and thorough training of students in order to fit them for the responsible duties that devolve upon practitioners of medicine. He shall, whenever an epidemic disease is spreading abroad, or in any country which by commercial or other relations may endanger the health of the inhabitants of the United States, have power to call a conference of the Surgeon-Generals of the Army, Navy and Marine Hospital Service, and the executive officer or officers of the various State boards of health throughout the country, to consider and advise with him in regard to the best methods to be pursued to protect the country against the invasion of any such epidemic disease, and the results of such conference shall be, by the Secretary of Public Health, communicated to the President and his Cabinet for such action as they may deem wise and expedient.

Besides the reports of the state of the public health which he shall make from time to time, the Secretary shall make an annual report to Congress, with such recommendations as he may deem important to the public welfare, and the report, if ordered printed by Congress, shall be done under the direction of the department. The necessary printing of the department shall be done at the Government printing office upon the requisition of the Secretary, in the same manner and subject to the same provisions as that of other printing for the several departments of the Government.

Sec. 3. The President is authorized, when requested by the Secretary of Public Health, and when the same can be done without prejudice to the public service, to detail officers from the several departments of the Government for temporary duty, to act under the department of Public Health to carry out the provisions of this act, and such officers shall receive no additional compensation except for actual and necessary expenses incurred in the performance of such duties. When a detail of such officers can not be made, the Secretary, approved by the President, may employ such experts, and for such time and in such manner as the funds at the disposal of the department may warrant.

Sec. 4. That to defray the expenses in carrying out the provisions of this act, the sum of fifty thousand dollars ($50,000,) or as much thereof as may be necessary, is hereby appropriated to be disbursed with the approval of the President, under the Secretary of said department.

This act shall take effect sixty days after its passage, within which time the Secretary and Assistant-Secretary may be appointed.

CORRESPONDENCE.

LETTER FROM BERMUDA.

Winter Days in Summer Islands—Notes from the Land of the Lily and the Rose.

Hamilton, Bermuda, Feb. 28, 1894.

To the Editor:—Out of the gray and the gloom of a foggy February morning steamed the *Trinidad* to a summery land at sea, bearing the biggest boatload of tourists ever bound from New York to Bermuda.

The early advent of Lent doubtless had much to do with this unusual tide of travel, though the fashion still obtains of waiting till nearly the end of winter before coming here.

From the snow and the slush, the hail and the cold of New York and Brooklyn to the warm sunshine and balmy breezes of Bermuda—when life out of doors is a perennial pleasure—is a change so great that many fail to realize it, and nothing less than a personal experience will convince a doubting searcher for health or pleasure that here is a charming country, where the real rivals the ideal, and where fact touches fancy, in the picture painted after conning the story of these evergreen isles.

We sailed from the streets of Gotham, and the shores of Long Island heavily mantled in wintry garb, and though head winds and high seas delayed our coming and laid some of us low, the ills that betide a luckless traveler at sea were soon forgotten—for most troubles have an ending, and sea-sickness isn't bad after its over—in the gladsome sight of emerald hills, and white-walled, white-roofed houses in their rimming of green, glistening under a sunny sky.

The first thing noted by those who have not been here for a couple of seasons is the absence of the antiquated plan for getting ashore, which once so much amused newcomers. The water at the wharf not being deep enough to allow of anchoring alongside, and the city fathers refusing to build a proper pier, two huge poles were hauled on board by steamer windlass, and along these crawled several agile ebony athletes, with cross bars and rope, lashed the bars firmly, laid planks lengthwise, and on these passengers went ashore. Now, a spacious granite quay permits close coming of steamers, and the style of disembarking is quite up to date.

The march of improvement in Hamilton has been marked during the last year or two. The most notable advance, so far as concerns the Front Street pedestrian, is the fine granite pavement that now extends the whole length of that thoroughfare. The contrast in comfort with the ancient and disreputable brick sidewalk, is one that must be felt to be appreciated. Architecturally, the forward movement has been decided, both in public and private. Of the former, in Hamilton, the most prominent relates to the House of Parliament, which has been enlarged by the addition of a colonnade on the south front, handsome arcades on the other sides, and an ornate tower, of which the most striking ob-

ject is a handsome clock made by Gillert and Johnston, of Croydon, near London. These additions had been for several years in contemplation, but the project languished till 1887 when a joint committee of the Bermuda Council and Assembly reported in its favor as the most suitable Bermudian memorial of Victoria's fifty years reign, and though progress was slow the tower—which is built of the native coral with a mixture of red bricks and concrete, with terra cotta trimmings—was completed late last year, the clock put in position, and at midnight, 'twixt 1893 and 1894, the dials—each seven feet in diameter—were illuminated, and watched by a large crowd as the clock struck the closing hour, and far ewell to the parting year. This clock—long waited for—is truly a timely addition to the attractions of Bermuda; and, topping the tall tower of Parliament House which is on one of the highest points in town, it makes a landmark noted for miles around. May its life be long and strikingly useful!

"All things come to him who waits," and history has repeated itself along this line to the Bermudian, native and visitor, who so long has been waiting for the finishing of the new Government House. In 1882, an Act was passed giving $40,000 for its erection. Work was begun, but the money proved not enough, and when more was asked for, it was refused. Work ceased, was resumed, again ended, and this shuttlecock sort of business went on for years, till in 1890 it was decided to carry the work to completion, and in July, 1892, the present Governor became its occupant. It is a handsome structure, Spanish in style, of which the Bermudians may well be proud, and from the towers can be had charmingly varied views that compass almost the whole country. The approaches are not yet complete, and the opportunity for some superb landscape gardening by terracing the hillside and flowering the meadow between the House and Hamilton is such an exceptionally fine one that Bermudian enterprise should forge to the front and make it what it would surely be—a thing of beauty. The old House was razed in the autumn of 1892, and the garden with the semi-tropical flowers and foliage alone remains. The houses in Bermuda are almost without exception, built of coral composing the island structure, which is white and so soft that it can be cut and trimmed with saw and chisel, but hardens promptly on exposure. The roofs are thin slates of the same material. These are annually whitewashed, and rising 'mid their emerald surroundings—the Islands are always green—give a charm to the landscape that must be seen to be appreciated. Each dwelling is required by law to be provided with a tank for rain water taken from the roof, which, with the yearly whitening insures its purity. At various places, on hillside and elsewhere, are shallow basins leading to reservoirs cut in the coral; these catch and retain the rain. There are wells, but the water is too brackish to drink. Lately, the supply has been increased by several artesian wells, the water of which is good.

The drives in Bermuda are delightful. Smooth, coral roads, with ever-varying vistas of land and ocean make them specially attractive. The service is good and cheap—one dollar the first hour and half that each after hour. The fine roads give a special charm to cycling, and lovers of this sport find the wheel an added pleasure to the winter outing.

The health of these Islands is almost always good. A healthy October presages a healthful winter. There has been no epidemic in many years. The greatest mortality is under five, and among the blacks, is due largely to neglect. The leading death cause is consumption. Births and deaths are fully recorded. The former lead. Long lives, eighty-five to ninety-five years, are not uncommon. There are nine registered medical men, besides ten Army and five Naval surgeons. There are two health officers—a post surgeon at St. George and a local one at Hamilton. A general Board of Health is composed of the Governor and Council—the latter, nine leading non-professional men. Quarantine regulations are careful and complete.

At the last session of Parliament, the question of sanitation and a remodeling of the Health Act of 1864 was debated, and the Attorney-General moved to introduce a new bill but, strange to say, the motion was lost. One of the features of the new bill was for the formation of, a general Board of Health to consist of the Colonial Secretary, one member of the Council, two members of the Assembly, the senior medical officer of the Army and of the Navy, three civilian doctors and a resident physician who was to be sanitary inspector, clerk to the general board, adviser to the local boards, and also superintendent of the insane asylum, and health officer for Hamilton; not to engage in private practice, and to have a salary of $2,000. Later in the session, a bill was introduced to import from England a portable steam disinfecting apparatus but this also failed. Quite likely another bill will be presented at the session of the Assembly next May.

La grippe has prevailed quite extensively in the south and west of the country since January, but few were fatal. The health of the troops stands high. The new army hospital—north of Camp Prospect on high ground, apart from the barracks—was completed and occupied towards the close of 1892. Every advanced sanitary appliance is to be found there, and there is a separate building for infectious diseases.

Through the efforts of Dr. Harvey—one of the leading medical men of Bermuda—a cottage hospital has been erected about a half mile from Hamilton and is now open, in charge of two women graduates of American training schools. Nine-tenths of its cost was given by Americans. It may prove of much value should contagious disease occur among visitors. The nurses are at command of any one in Bermuda, when not on duty at the hospital, and their skilled service may be a boon to many. Great credit is due Dr. Harvey for this good work. The Doctor who is also Medical Director of the Bermuda Insane Asylum, has been giving a course of lectures on sanitary subjects, and is now engaged in a scheme for promoting the sewerage system of Hamilton.

Bermudians assert their climate the most equable in the world and temperature tables support this claim; statistics prove the winter here more even than at Los Angeles, San Diego, Jacksonville or St. Augustine. The average for the season of 1888–1889, was sixty-three; for 1889–1890, sixty-three; for 1890–1891, sixty-four—a really remarkable record. As a rule, October, November, April, May and June are most agreeable. During December, January and February often the weather much of the time is charming. A clerical friend, convalescing from acute lung disease, who came to Bermuda by my advice, in December, returned in a month, delighted with his experience having added twenty pounds to his avoirdupois, and enjoyed the luxury of an ocean bath on Christmas. March is the worst month when east winds, low barometer and thermometer and frequent showers are apt to prevail. The porous soil admits of outings soon after a heavy rain. As in England, mornings often betoken a stormy day, but the clouds roll by to a beautiful afternoon. July and August, to the "outside barbarian" are too warm for his liking, and September, with its sultry breezeless days is most oppressive of all. May and June, as regards floral beauty of forest and field, offer special attractions, but Fashion at present has decreed that, during March the full tide of travel shall crowd steamers, hotels and boarding houses to discomfort. The highest pleasure

and good from a sojourn in this lovely little land will never be found till this senseless fad has had its day.

Twenty-four of the twenty-six who came with me are here for the first time, and all have reason to felicitate themselves, for the weather, fine on arrival has bettered till now it is truly ideal. A lucky lot, indeed, we are, for Jupiter Pluvius has been in one of his kindliest moods, and only one day of the now nearing a dozen, has he showered upon us enough to prevent our usual daily outing.

And, too, what a charming contrast along thermal lines, for while you luckless mortals have been wrestling with the cold, and shivering and shaking in an effort to keep warm, we last Sunday went to the garrison service, at Camp Prospect in open carriages, and at its close sat in them with the sun streaming on us and listened to a delightful open air sacred concert, given by the regimental band of sixty pieces on the sward of a cedar grove near the Camp. Such a story—which may seem like a fairy tale—will give some idea of the changed conditions as regards winter comfort that obtain less than two days sail from New York, and which, well appreciated, must convince those seeking health or pleasure that Bermuda is one of the most charming winter marine resorts in the world, and as to ease of access for Americans without a peer.

The *Trinidad*, newly equipped, made her first trip from New York this year in forty-six and one-half hours. This will be welcome news to many, who, like the writer, enjoy an outing here, and must tend to make the travel tide hither higher than it has ever been; and when, as is expected, a still swifter steamer is put on the line, there is reason to think the voyage can be made in thirty-six to forty hours. Then, indeed, will those seeking surcease from toil with surroundings that tend quickly to rest and restore, find this boon almost at their doors; for to the writer—here for the fifth time, and who again and again has been abroad—Bermuda is the most restful place on earth. And where a people so much in need of such bounty as Americans? Where a folk, so many of whom are rushing along at "the pace that kills?" Almost tumbling over each other in their haste for fame or fortune, and so making themselves victims of tire and insomnia, who here might "throw physic to the dogs," and get that which, more than drugs or doctors, will give them a new lease of life and so add to happiness and length of days.

This is a typically Bermudian day. A gentle sou'west wind is blowing; bright sunshine, the balmy air laden with life's elixir, which blows so often over this favored isle, and song of birds blend to make alluring the matchless beauty of a land so unlike our own. A well-known man lately here, told a friend of ours that he had found the Garden of Eden. It is a Paradise for many—*not all*, for there are those who should keep well away from Bermuda. It is *not* the place for *consumptives*, or any far along in wasting disease. But for those battling with neuralgia, or coming back to health from acute illness or *narcotic disease*, it is, in truth, a happy land; and for many hapless mortals tossing in wakeful nights it is a peerless place in which to woo and win the good angel of sleep. For the worn and weary, for tired pilgrims along any line, be it of brain or brawn, it is a Mecca to which they can come with high hopes of getting rest and relief.

It seems strange more do not come here. The fact is, few realize that forty-eight hours from New York is an elysium where frost and the white mantle of winter are unknown; where roses bloom the year round out of doors; and where the sleep-giving, health-bringing breezes, the panoramic beauty of sea and shore, and the quiet, restful, lotus-land alike combine to make halcyon days.

Bermuda is good, too, for those not ill. Let the busy American doctor make a break in his over-active life, take a a fortnight off and a ten days' sojourn in these sun-lit isles, and my word for it—if conditions favor—he will lay up a store of happy memories for many a time to come.

J. B. Mattison, M.D.

In Opposition to Woman Doctors in Insane Asylums.

Richmond, Va., March 19, 1894.

To the Editor:—You refer in a late issue to the contest in our late Legislature on the "Woman Doctor Bill." Two years ago the lower House passed a bill unanimously compelling the Board of Directors of each insane asylum to put one woman doctor in office for each institution. This bill was defeated in the Senate, though every newspaper in this city and many in the country were heartily in favor of it. We had it "hot and heavy" in the newspapers. Men and women abused me pretty roundly for my opposition. I think I wrote a dozen letters in the papers against it. The asylum influence was very great against it, and but for this help I would have been badly whipped. In the last two years I have given this subject a great deal of thought and observation, wrote my pamphlet on "Woman's Place," published 1,000 copies of it and sent most of the members of the last Legislature copies, and I determined to go before the House Committee on Asylums this year and fight it at the start. My friend, Dr. Hunter McGuire, was on the other side of the question. As you know, he is a man of great influence here. He made as good a speech as any man could make on the wrong side of a question—spoke of the trained nurses in his Hospital (St. Luke's); what "deft fingers" the girls had, how readily they stopped hemorrhages, etc. In reply, I asked my friend: "What would St. Luke's be without Hunter McGuire?" He replied: "Nothing." The Committee was nine to one, and I hope this will end the question in Virginia for years, though the papers say not.

Before this meeting of the Committee I had been interviewing some of our best and most intelligent ladies on this question. To my surprise I found they took this ground, absurd as most intelligent *Christian* men would, at first sight, regard it. Said they: "If I were a doctor and a young girl, especially the daughter of a friend of mine, were to come to me and say: 'Doctor, I have been deceived by a young man and am in 'family way;' do relieve me for my dear mother and sisters' sake!' I would certainly relieve her." I said: "Madam, you would be sent to the penitentiary by the laws of Virginia, and would, in the eyes of God be committing murder." But they replied: "You men made these laws, and they are unjust. Men go *everywhere*, where they please, and don't lose caste; shall a girl for one offense, for trusting to one of you men whom she supposed had some regard for his oft-repeated oath of undying devotion, 'slip up;' be doomed to everlasting ruin and disgrace! Where is the sin? As to God's judgments, you are a poor teacher to warn women against them." You will see this argument has the semblance of truth in it, and I find it satisfies women of intelligence.

We are standing, Mr. Editor, upon the mouth of a volcano wider than Vesuvius. For years, in the North, married women have been using the *preventive* treatment against children, and I find it is spreading South. Two of my patients, both married women and pretty well to do, in the past month asked me to produce abortion; one upon the flimsy excuse that she had contemplated a visit to another State this summer. For promptly refusing she dismissed me. One lady I refused last year, went to Washington for the purpose, and came near losing her life. There may be o mestic, national sins more dire in the sight of God than

political offenses; and I want the medical profession throughout the whole Union to set their faces first, against the woman doctor, and against the God-defying and law-breaking male doctor who will sell his soul to the devil for five or twenty dollars.

In the "Institute" referred to in the sad Breckenridge scandal, we have a glimpse into what will happen in this country when it is filled with hospitals of this kind run by women doctors of the class named. A refuge for women of all kinds, and run in the interest, not of *science or humanity*, but of greed for gain.

By the way, I send you a clipping of a brief letter of mine published yesterday (the last shot, I hope) from one of our leading papers. The fair correspondent referred to abused me pretty roundly as selfish, jealous, etc.

"THE WOMAN DOCTOR'S BILL.

RICHMOND, VA., March 5, 1894.

"*To the Editor of the Dispatch:*

"A fair writer in the *Times* recently made quite a free use of my name, motives, intelligence, etc., in reference to the 'Woman Doctor' in the insane asylums.

The gentleman from whom she received her information of the night's session of the Committee on Asylums has done me injustice, of course not by design. I said: 'There were one or two mean, venal doctors (men, of course), in Richmond, I would like to send to the penitentiary for violating law, but if a woman doctor violated law it would not be for money, but from kind womanly sympathy.' I sent the fair correspondent a copy of my pamphlet on 'Woman's Place,' which I hope she will be kind enough to read, and I will be glad to have her criticism, either private or public. I also refer her to my letter to the State, in reference to my high respect for women. Perhaps, being her senior, I may be allowed to caution her lest she violate God's law in judging my motives.

Fully one-third of my past forty-five years' medical life has been given to the service of poor women and their children, without money or price. This regard for women runs through the lengthy pamphlet I send you. Since coming to my majority I have always and everywhere taught that a man is not worthy of the name, who would not willingly die for mother, wife, sister, daughter, aye for any woman, however poor or humble, who claimed his protection. This is not mere theory, as I can prove. On one occasion I nearly lost my life for a very poor woman, no kin to me. Can better evidence be given of my love and admiration?"

Respectfully, W. W. PARKER.

He Very Properly Calls Medicus to Order.

MILWAUKEE, March 25, 1894.

To the Editor:—As a member of the AMERICAN MEDICAL ASSOCIATION and a Jew, I desire to enter an emphatic protest against the dragging of questions of race and religion into the discussion of a matter of business policy, as is done by "Medicus" in the JOURNAL of March 24. The fact that the gentlemen specified as Solomon and Isaac chose to differ from "Medicus" does not justify the wholesale and thinly veiled charge of hypocrisy and dishonesty, worthy only of a fifth rate political sheet, which is made in that letter.

Unless it is the policy of the JOURNAL to publish *all* communications sent to it, I fail to see the justification for publishing a gratuitous insult to a class of members who happen to differ from the majority in creed. A note suggests that the matter be settled on the floor of the ASSOCIATION. Surely no presiding officer, *of any respectable* body, would allow such language to be used in debate.

If the ASSOCIATION is not broad enough to cover all reputable medical men without reference to race or creed, the sooner we know it the better.

G. J. KAUMHEIMER, M.D.

[The right of every member to have his say is recognized, and the editor joins Dr. Kaumheimer in expressing the hope that all personalities may be eliminated from this discussion, as they will not be printed].

Stands by Dr. Cohen.

BOSTON, March 26, 1894.

To the Editor:—I can not conceive how you permitted the publication of the contemptible, narrow and insulting letter signed "Medicus." He may well stay in the background by keeping his name away from the public—cowardice is depicted in every line. I am inclined to think that "Medicus" has ill feelings against Prof. Solomon Cohen for reasons known to himself—he was probably plucked by Dr. Cohen for deficiency in the subject that Dr. Cohen lectures on?

I will not attempt to discuss the "advertising question," for you have requested the matter to end.

The publication of the vile letter has, and will excite bitter criticism.

It is unnecessary for me to speak in defense of Dr. Cohen and the Hebrew race.

Hoping you will find space to publish this brief note, so that "Medicus" can see what repute he has gained by making a ferocious attack on many of the noble and leading physicians of our country.

S. GOODMAN, M.D.

Attacks Our Exchanges.

PHILADELPHIA, March 21, 1891.

To the Editor:—I write to endorse Dr. Cohen and the Code, but I go further: I would not receive or quote from any journal that publishes advertisements of the character condemned by Dr. Cohen. My proposition is that no ASSOCIATION money shall be paid for printing a journal to be given in exchange to any journal that prostitutes itself by publishing the vile advertisements in question. Let us fight this thing to the finish. PRO-COHEN.

Endorses the Code and Dr. Cohen.

SAN JOSE, CAL., March 23, 1894.

To the Editor:—I write to endorse the article written sometime since, by Dr. N. S. Davis, of Chicago, on revision of the Code and the proposed changes in the constitution of the AMERICAN MEDICAL ASSOCIATION. Every word in that article is true, and it should be carefully read by every member of the ASSOCIATION. That article has not been answered, but I presume there will be an effort made to patch up the walls that have been knocked down by Dr. Davis just before the meeting in San Francisco.

I also endorse the remarks of Dr. S. Solis-Cohen and Dr. W. P. Howle. JOHN WRIGHT, M D.

BOOK NOTICES.

A Text-Book of Diseases of the Ear and Adjacent Organs. By DR. ADAM POLITZER, Imperial Royal Professor of Aural Therapeutics in the University of Vienna, Chief of the Imperial-Royal University Clinic for Diseases of the Ear in the General Hospital, Vienna. Translated into English from the third and revised German edition, by OSCAR DODD, M.D., Clinical Instructor in Diseases of the Eye and Ear, College of Physicians and Surgeons, Chicago. Edited by SIR WILLIAM DALBY, F. R. C. S., M.B., Consulting Aural Surgeon to St. George's Hospital, London. In one large octavo volume of 748 pages, with 330 original illustrations. Cloth, $5.50. Philadelphia: Lea Brothers & Co. 1894.

The writings of Adam Politzer on the ear are held in high authority throughout the civilized world, and this text-book has for many years been considered his best. In this edition much space and attention have been given to intra-cranial diseases of otitic origin, such as subdural abscess, otitic meningitis, sinus-phlebitis, etc. The operative treatment of thrombosis of the transverse sinus is, according to the author much simpler than opening of intra-cranial abscess. The operation is thus performed: "After chiseling away the mastoid process, and carefully removing all diseased portions, the sinus is laid free. After this is done one should examine to see if the wall of the vein has the normal dark blue color, or if it is inflamed, thickened, covered with exudate, whether it pulsates or not, and whether it is soft or hard to the touch. Want of pulsation, and resistance leads

one to think of thrombus. Fluctuation with want of pulsation, should lead one to think of purulent or sanious degeneration."

He may then explore with a Pravaz or open the sinus by a vertical incision according to Lane's method. If the thrombus extend into the jugular, the author recommends the method of Rushton Parker, an incision through the skin into the jugular, and afterwards applying a ligature.

Lectures on Auto-Intoxication in Disease, or Self-Poisoning of the Individual. By CH. BOUCHARD, Professor of Pathology and Therapeutics, Member of the Academy of Medicine and Physician to the Hospitals, Paris. Translated, with a Preface, by THOMAS OLIVER, M.A., M.D., F.R.C.P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, Newcastle-upon-Tyne; and Examiner in Physiology, Conjoint Board of England. In one octavo volume; 302 pages. Extra cloth, $1.75 net. Philadelphia and Chicago: The F. A. Davis Co., Publishers.

This volume deals with the toxines. Pathogenic processes generally; elimination of poisons; preliminaries to the study of the toxicity of emunctory products; intestinal antisepsis, and of various diseases due to bacillary products. The whole a series of lectures.

The author begins with the assertion that in this age Medicine has changed her attitude of observation. For a considerable time the chemical division of Bacteriology has been making great advances, and to-day the chemistry of the microbic products is the most important subject in connection with the subject. The author informs us that the healthy man is "both a receptacle and a laboratory of poisons. He receives them in his food, he creates them by disassimilation, and he forms them in his secretions. The human body is the theater of the toxic elaborations carried on by the normal microbes which constantly inhabit the alimentary canal."

The Dispensatory of the United States of America. By DR. GEO. B. WOOD and DR. FRANKLIN BACHE. Seventeenth edition by H. C. WOOD, M.D., L.L.D., JOSEPH P. REMINGTON, Ph.M., F.C.S., and SAMUEL P. SADTLER, Ph.D., F.C.S. Pp. 1930. Bds. Philadelphia: J. B. Lippincott Company. 1894.

This well-known and standard treatise needs no introduction to the readers of the JOURNAL. When a book has passed to its seventeenth edition it has passed beyond the power of the reviewer to affect its standing. It therefore only remains to inquire how fully the last edition has kept pace with the advance of pharmacy since the issue of its immediate predecessors which have justly made the work famous. In this respect we can truly say that no pains have been spared to insure accuracy and completeness. It is somewhat unfortunate that the metric or decimal system should be given a secondary place in giving the doses of drugs, and this conservatism seems to have no reasonable excuse, inasmuch as the "National Dispensatory" and the Pharmacopœia itself practically recognized no other system. Notwithstanding this defect, the book will continue to be as it has in the past the standard authority on this subject.

Transactions of the American Pediatric Society, 5th Session, held at West Point, N. Y., May 24, 25 and 26, 1893. Edited by M. CRANDALL, M.D. Vol. V. New York: Printed by Bailey & Fairchild. 1893.

This volume contains a list of the officers and members, and the papers read at the last meeting of the Society. Most of them have been printed elsewhere. Those interested in the diseases of children will find much that is interesting and instructive in this volume.

Congenital Affections of the Heart. By GEORGE CARPENTER, M.D. 16 mo., cl., pp. 103. London: John Bale & Sons. 1894.

This little volume is well written and handsomely printed in clear type, and includes the essentials of the subject, which has not up to this time received very much attention. It will be found very instructive.

Tables and Notes on Human Osteology, for the Use of Students of Medicine. By SEBASTIAN J. WIMMER, M.A., M.D. With a preface by PROF. WILLIAM F. WAUGH, A.M., M.D. 16 mo., pp. 239. Philadelphia: Medical Publishing Company. 1894.

The author has compressed in a compact and convenient volume a careful compilation of the essentials of Osteology. In Dr. Waugh's preface he gives his opinion that this book is "the ideal help to the student in term time," and on examination we concur in his judgment. We find a tabulated summary of all the points to be memorized, arranged in such a way that it can not fail to be of service to the student.

Bulletin of the Harvard Medical Alumni Association, No. 5. Report of third annual meeting, held in Boston, June 27, 1893. Boston: Published by the Association. 1893.

This is a beautifully printed volume, gives the minutes of the last annual meeting and the speeches made at the annual dinner. On this occasion Dr. J. R. Chadwick presided. His presidential address contains valuable historical material. Drs. J. M. DaCosta, Abram Jacobi and W. S. Chaplin made speeches of interest.

NECROLOGY.

JOHN H. RAUCH, M.D., in Lebanon, Pa., March 24. Dr. Rauch was born in Lebanon, Pa., Sept. 4, 1828. He was graduated in medicine at the University of Pennsylvania in 1849. The following year he settled in Burlington, Iowa. His mind early turned toward natural sciences, and he became a private pupil of Prof. Louis Agassiz of Harvard College, and lived for some time in his family. In 1850, on the organization of the State Medical Society, he was appointed to report on the "Medical and Economic Botany of Iowa," and his report was published. He was an active member of the Iowa Historical and Geological Institute, and made a collection of material—especially ichthyologic—from the Upper Missouri and Mississippi Rivers for Prof. Agassiz, a description of which was published in *Silliman's Journal* in 1855. In 1857 he was appointed Professor of Materia Medica and Medical Botany in Rush Medical Collge, Chicago, which chair he filled for the next three years. In 1859 he was one of the organizers of the Chicago College of Pharmacy, and filled its chair of materia medica and medical botany. During the Civil War he served as Assistant Medical Director of the Army of Virginia and later in Louisiana. At the close of the war he was breveted Lieutenant-Colonel. On his return to Chicago, Dr. Rauch published a paper on "Intramural Interments and Their Influence on Health and Epidemics." He aided in reorganizing the health service of the city, and, in 1867, was appointed a member of the Board of Health and Sanitary Superintendent, which office he filled until 1873. During his incumbency the great fire occurred, and the task of organizing and enforcing the sanitary measures for the welfare of 112,000 homeless men, women and children devolved upon him. In 1876 he was elected President of the American Public Health Association, and delivered the annual address on the "Sanitary Problems of Chicago," at the 1877 meeting of the Association. When the Illinois State Board of Health was created in 1877, Dr. Rauch was appointed one of its members, and was elected its first President. In 1878–'79 the yellow fever epidemic in the Southwest engaged his attention, resulting in the formation of the Sanitary Council of the Mississippi Valley and the establishment of the river inspection service of the National Board of Health. His investigations on the relations of smallpox to foreign immigration were embodied in an address delivered before the National Conference of the State Board of Health at St. Louis in 1884. In 1887 he published the preliminary results of his investigations into the character of the water supplies of Illinois. In 1888 he published a report on the quarantines of the Atlantic and Gulf coasts, and in 1892 he assisted ex-Surgeon-General Hamilton in the establishment and equipment of Camp Low, quarantine sta-

tion. Dr. Rauch was the author of monographs chiefly in the domain of sanitary science and preventive medicine. His chief work as a writer is embodied in the reports of the Illinois State Board of Health in eight volumes.

Frank P. Yetter, M.D., of Bowmansville, Pa., March 4.—John T. Liston, M.D., of Bunker Hill, Ind., aged 90. He is said to have built the first log cabin in the Wabash Valley.—James F. Bailey, M.D., of Cincinnati, March 16, aged 55. He was recently a member of the Ohio Legislature, and the author of the "Bailey Primary Election Law," which is a great improvement in securing purity in elections.—Geo. W. Norton, M.D., at Earlville, Ill., March 7, aged 90. He had resided in the vicinity since 1846.—F. G. Payn, M.D., of Bergen Point, N. J., March 5, aged 70. He was born in England, and practiced in Bayonne and Jersey City since 1856.—J. P. S. Roberts, M.D., of Bairdstown, Mo.—H. S. Cox, M.D., of Columbia, Tenn., March 8.—W. S. Irwin, M. D., of Louisville, Ky., March 8.—W. C. Hardin, M.D., of Louisiana, Mo., March 12, aged 88.—Anson Amesbury Ransom, M.D., of South Orange, N. J., March 11, aged 71. He was a graduate of the University of the City of New York.—J. P. Wallace, M.D., of Greeley, Col., a graduate of Bellevue (1875), March 11, aged 45.—G. H. Peebles, M.D., of Lincoln, Neb., March 15, aged 53 years. He was a graduate of Rush Medical College, class of 1863.—Reuben A. Vance, M.D., of Cleveland, Ohio, March 19.—Wm. C. Cole, M.D., of Fountain County, Ind., March 11.—Abram Sellers, M.D., of Lebanon, Ky., March 13, aged 87.—J. M. Bryan, M.D., of Philadelphia, March 14. He was a graduate of the University of Pennsylvania, class of 1892.—B. F. Hopkins, M.D., Rapatee, Ill., March 4, aged 43.—Eustace W. Fisher, M. D., of New York city, March 5, aged 51.—Charles Devol, M.D., of Albany, N. Y., March 5, aged 85. He was a graduate of Fairfield Medical College, class of 1831. Five years later he became a Methodist preacher but resumed the practice of medicine in 1855. He was devoted to the service of the poor.—Clarence E. Riggs, M.D., of New Orleans, March 14, aged 27. He was graduated at Tulane University.—H. J. Webb, M.D., of Pullman, Washington, March 4. He was one of the oldest and best-known physicians of Eastern Washington.

ASSOCIATION NEWS.

The Association Train will leave Chicago Monday, May 28, via Santa Fe R. R., Rio Grande Western, and Southern Pacific, for San Francisco via Denver, Colorado Springs, Leadville, Manitou, Glenwood Springs, Salt Lake, Ogden, Truckee and Sacramento. Returning, after the meeting, the train will pass through Sacramento and Northern California to Portland, thence east by way of the Northern Pacific R. R. to St. Paul. C. M. & St.P. R. St. Paul to Chicago. A stop over at Yellowstone National Park for those who desire it has been arranged, and it has been understood that at several places on the journey there will be short stops. President Hibberd's party in a special car join the train at Chicago, and the St. Louis party are expected to join at Kansas City. From all points east and south, concentrating on this train should be effected at Chicago and St. Louis. For all information relating to this train, fares, etc., address J. M. Connell, 212 Clark st., Chicago, or any agent of Santa Fe line in other cities. Rates promised are the lowest excursion rates at time of departure.

This is the only route on which arrangements have been perfected by the Trustees.

Section on Physiology and Dietetics.—*To the Editor:*—I present to you the following announcement to the members of the ASSOCIATION apropos to the Section on Physiology and Dietetics prepared by the Secretary of the Section, Dr. Ephraim Cutter.

I earnestly commend the Section to all members of the ASSOCIATION interested in the subject, and indulge the personal hope that there will be a hearty response in the way of titles of papers sent immediately to Dr. Cutter. Very respectfully yours, I. N. LOVE, M.D., Chairman.

NEW YORK, Feb. 10, 1894.

SECTION ON PHYSIOLOGY AND DIETETICS.

To the Members of the AMERICAN MEDICAL ASSOCIATION:—This Section should be a mirror of your 1894 knowledge. It is believed there is something to mirror where American facts and ideas have precedence. Those who look for such facts and find foreign ones in their place, are disappointed. You must not say that there are no American facts. The number of medical ideas annually dying with their possessors is not small, as we judge. This Section is to rescue moritural and non-moritural dietetic and physiologic facts, no matter if they are little. A drop of water is a little thing. Yet vast oceans are made up of drops. To assist in this work you are hereby requested to give your contributions to any of the following subjects:

PHYSIOLOGY.

"Are the Eustachian Pharyngeal Orifices Closed or Open?" "Physiology of a Larynxless Voice." (Prof. S. Solis-Cohen invited); "Musical Action in Man and Animals;" "Love as Healthful Affection;" "Digestive Leucocytosis;" "Functions of an Undeveloped Clitoris;" "Physiologic Action of Hot Water Drafts;" "Impression of Traits of Character of the Father at the Time of Conception on the Offspring;" "Physiology of Dynamos; or: Life a Question of Expenditure of Vital Force;" "Physiologic Effects of Galvanism;" "Is the Seat of the Soul in the Lamina Terminalis?" "Physiologic Significance of Anencephalous Babes;" "Is the Unborn Babe at Term Capable of Thought or Knowledge?" "Penal Physiology;" "Fashion vs. Physiology among Women;"

DIETETICS.

"Relations of Food to Insanity; *a*, Fatty Degeneration; *b*, Embolism; *c*, Difficult Digestion;" "Is Cancer Caused by the want of Proper Feeding?" "Air as Food;" "Good Bread;" "Food vs. the Knife in the Treatment of Cancer of Breast;" "Is Cookery Drudgery and Degrading?" "Peanuts as Food in Fatty Degeneration;" "The Microscope and Food;" "Restaurants Fixed and Mobile;" "Voice and Food;" "Food vs. Resection of Ribs in Chronic Pleurisy;" "Dietetic and Cardiac Concretions sometimes called Polypi and Food;" "Relations to Physicians of Cooking Schools;" "Are there not Close Relations of Food to Leprosy?" "A Poor Single Food may be better than many Good Foods Eaten at One Time Indiscriminately;" "The Formation of Alcohol in the Alimentary Canal from Fermenting Food;" "Distilled Water as Food;" "Cow's Milk as Sole Food for Adult Man;" "Dietetics and Epilepsy;" "Dietetics and Baldness;" "Dietetics and Teeth;" "Is Promiscuous and Hearty Feeding the best for Health?" ""Living to Eat and Eating to Live;" "Dietetics changing Funerals to Weddings;" "Dietetics and Fibroid Strictures and Thickening of the Alimentary Canal;" "Ought the AMERICAN MEDICAL ASSOCIATION to Advertise Common Flour as a Royal Therapeutic Dietetic?" "Review of the Massachusetts State Board of Health Report, 1892;" "When Institutes of Technology and Schools of Mines Teach the Morphology of Foods, ought not Medical Colleges to do the Same?" "Foul Diseases that Masquerade under other Names;" "Does the Climate (Air Food) of San Diego Cure Bright's Disease of the Kidneys?" "Food and Calculi;" "Food and Atheroma;" "Food and Amyloid Degeneration;" "Food and Inflammation;" "Popular Food Ideas that have Slain Thousands;" "Dietetics and Religion;" "Dietetics and Male Neurasthenia;" "Why should not Government Protect the Food of Man as it does the Food of Plants?" "Watts, Applied to Food: 'Each pleasure has its poison too, and every sweet a snare;'" "Consumption of the Bowels and Food;" "Food and Colloid Feces or Amœba Coli;" "Food and Heart Disease;" "Food and Skin Diseases;" "Food and the Type of Disease;" Food and the Exanthemata;" "A New Army and Navy Ration;" "Does Sea Air contain more Mineral Food than in Land Air?" "Diet and Seasickness;" "Diet and Defective Hearing;" "Diet and Ophthalmology;" "Oatmeal—Objections to as a Food for Man;" "Vegetable vs. Animal Food;" "Food and Nerve Diseases;" "Food and Nasal Catarrhs;" "Dietetic Importance of a National Secretary of Health;" "Importance of the Pure Food Bill now before Congress;" "Importance of Freshness in Food from the Botanic Kingdom;" "Impure Water for Ships;" "Why are Gruels Good Food?" "Diet Treatment of Bright's Disease." (Signed.)

I. N. LOVE, Chairman,
EPHRAIM CUTTER, Secretary.

SOCIETY NEWS.

International Medical Congress.—It is stated that about 200 American physicians will attend the International Medical Congress at Rome. There were over 600 at Berlin.

The Herkimer County (N. Y.) Medical Society has elected the following officers: President, Dr. Cyrus Kay, Jr.; Secretary, Dr. A. W. Suiter; Treasurer, Dr. Graves. The other officers of last year were reëlected.

Have Societies Named for Them.—The Philadelphia brethren are having a mild epidemic of new medical societies, named for favorites; they now have medical societies respectively named for Prof. Hobart A. Hare, Prof. L. Webster Fox, Prof. Wm. E. Ashton and Prof. Jas. M. Anders.

Lancaster City and County Medical Society.—At the last meeting of the Lancaster (Pa.) City and County Medical Society an interesting paper was read by C. M. Franklyn, M.D. on "Fractures of the Skull." Cases were reported by Drs. Welchans, Brenholtz, Craig, Roebuck, Ziegler, and Miller.

An Old University.—Don Juan Ortega Rubia says in the *Revista Contemporanea*, Madrid, that "one of the oldest seats of learning in Europe, the University of Valladolid, celebrated recently its sixth centennial as an established university. In 1293 King Sancho IV of Castile and Leon gave charter to this school. But it had been in existence long before the Christian era."

Michigan Surgical and Pathological Society.—At the annual meeting of the Michigan Surgical and Pathological Society the following officers were elected: President, Dr. E. W. Jenks; Vice-President, George Kirker; Secretary, J. A. Patton; Treasurer, Dayton Parker. The latter was the retiring President, and he tendered the members a banquet at the conclusion of the meeting, which lasted until a late hour. Toasts were responded to by Drs. Jenks, Kirker, Hough, Hamlin, Milligan, Maier, Ahlborn, Ranpier, Leadbeater and Alderman.

The Northern District Medical Society met in Woodland, Cal., March 13. The Yolo Medical Society entertained the members at a banquet. Following is the program:

"A Case of Procursive Epilepsy," A.W. Hoisholt, Stockton. Discussion opened by Elmer E. Stone, Marysville.

"Diphtheria," Oscar Stansburry, Chico. Discussion opened by C. H. Gibbons, Arbuckle.

"Gastric Ulcer," W. E. Bates, Davisville. Discussion opened by B. Caldwell, Biggs.

"The Decline of Maternity," David Powell, Marysville. Discussion opened by J. H. Parkinson, Sacramento.

"The Foothills of the Sierra Nevada Mountains in the Climatic Treatment of Bronchial and of Pulmonary Affections," R. F. Rooney, Auburn.

"The Causes and Treatment of Abortion," W. R. Cleveland, Biggs. Discussion opened by Thomas Ross, Sacramento.

"Some Peculiar Effects of La Grippe," H. D. Lawhead, Woodland.

"The Treatment of Venereal Diseases," W. J. Hanna, Sacramento.

The following are the present officers of the Society: President, Wallace A. Briggs; First Vice-President, J. R. Rooney; Second Vice-President, F. W. Benjamin; Third Vice-President, A. T. Hudson; Secretary, Elmer E. Stone; Treasurer, Oscar Stansburry. Board of Censors: W.A. Briggs, Chairman; G. W. Stratton, T. B. Reardan, W. E. Bates and Louis Melton.

The Indian Medical Congress.—The proposal to have a Medical Congress in India was considered at a meeting of the Council of the Calcutta Medical Society on January 24, when it was decided that an "Indian Medical Congress" shall be held in Calcutta at the beginning of January, 1895. The preliminary arrangements were discussed and a general plan sketched out. It was decided that in each province local secretaries, native as well as European, should be asked to coöperate with the Calcutta secretaries, and it was further decided that the sections into which the Congress should be divided should be:

1. Medicine including Pathology.
2. Surgery.
3. Obstetrics and Diseases of Women and Children.
4. Public Health.
5. Medico-legal Medicine and allied subjects.

Further details will be given in a future issue. It was decided that the Congress should be widely advertised, and that all medical men practicing in every part of the world, but especially in India and the East, should be invited to take part in it and submit papers to be read in the different sections.—*Indian Medical Gazette.*

Medical Society of the Missouri Valley.—The sixth semi-annual convention of the Medical Society of the Missouri Valley met at Omaha March 16.

President Jonas of Omaha, called the meeting to order at 9:30 o'clock. The registration and payment of dues followed. The Committee on Credentials made its report, which was adopted. Secretary Thomas of Council Bluffs, read the minutes of the last meeting, which were approved without discussion. Miscellaneous business and reports of committees followed. Several new members were admitted.

Dr. F. M. Hiett of Red Oak, Iowa, read an interesting paper on "Safe Anesthesia."

Dr. A. S. Mansfelde of Ashland, Neb., read a paper regarding "Brain Bruise—Contusion Without Hemorrhage;" Dr. Foote followed with "Cell Selections—Auto-infection"

Dr. Lanphear of Kansas City, who was on the program for a paper on "Vaginal Hysterectomy Without Clamps or Ligatures," asked for further time and he presented his paper in the afternoon.

Dr. J. M. Barstow of Council Bluffs, read an interesting paper on "Gasoline Poisoning," which was thoroughly discussed.

"Pulmonary Embolism" received the attention of Dr. Lowry of Lincoln.

The convention adjourned for lunch and reassembled at 2 o'clock, when the reading and discussion of papers was resumed.

The present Society was organized six years ago at Council Bluffs, and has 150 members, composed of the medical fraternity of Omaha, Council Bluffs, Sioux City, St. Joseph, Kansas City and other points in the Missouri Valley. The object of its organization was to foster acquaintance and meet semi-annually for the discussion of subjects of interest to the medical profession.

In the evening the doctors gave a banquet at the Commercial Club. Plates were laid for 100. The tables were artistically decorated with flowers and potted plants.

The following were the toasts: "The Doctor in Literature," Dr. Lowry of Lincoln; "Medical Education in the West," Dr. Bridges of Omaha; "Medical Charlatanry," Dr. Coulter of Omaha; "Post-Graduate Medical Education," Dr. Emmert of Atlantic, Iowa; "Women in Medicine," Dr. Van Mansfelde of Ashland; "The Physician and the Public," Dr. Gibbs of Omaha; "The Doctor in Politics," Dr. Macrae of Council Bluffs.

Association of American Physicians.—Preliminary program of the ninth annual meeting of the Association of American Physicians to be held in Hall No. 2, Columbian University, corner of Fifteenth and H Streets, Washington, D.C., on the mornings of May 29, 30, 31, and June 1, 1894.

President's Address, R. H. Fitz; "Some Researches in the Significance of Albumen and Casts, especially in those Past Middle Life," Fred'k C. Shattuck; "Some of the Chemic and Bacteriologic Characteristics of Milk," Thomas M. Rotch; "The Chemic Products of the Anærobic Putrefaction of Pancreatic and Hepatic Tissues, and their Effects upon the Tests for Morphia," Victor C. Vaughan; "The Effect of Various Metals on the Growth of Pathogenic Bacteria," Meade Bolton; "Dr. S. C. Martin's Researches on the Bacteria, of Vaccinia," Harold C. Ernst; "Note on the Observation of Malarial Organisms in Connection with Typhoid Fever," W.

Gilman Thompson; "Experiments in Artificial Melanosis," George Dock; "The Mild Character and Diminished Prevalence of Syphilis and the Infrequency of Visceral Syphilis," John H. Musser; "A Case of Osteomalacia," George Dock; "The Treatment of Typhoid Fever," Samuel A. Fisk; "The Treatment of Certain Symptoms of Croupous Pneumonia, particularly in Adults," Beverly Robinson; "A Study of the Temperature in Cerebral Apoplexy," Charles L. Dana; "Traumatic Headache," Charles F. Folsom; "Tetany in America," J. P. Crozer Griffith; "Clinical Report of Two Cases of Reynaud's Disease," Frederick P. Henry; "A Case of Mitral Stenosis, with great Hypertrophy of the Right Ventricle; Death from Hemoptysis," A. McPhedran; "Stomatitis Neurotica," A. Jacobi; "Nocturnal Pain in Dyspepsia," Henry M. Lyman; "Lead Palsy in Children," Wharton Sinkler; "A Report on the Ultimate Results obtained on Experimental Eye Tuberculosis by Tubercular Treatment and Preventive Inoculation," E. L. Trudeau.

The Constitution provides that papers shall not exceed thirty minutes in the reading.

The Association will hold its sessions and these papers will be read only on the mornings of May 29, 30, 31, and June 1. On the afternoons of these days the Congress of American Physicians and Surgeons will hold its sessions.

The Association of American Medical Colleges.—The fifth annual meeting of the Association of American Medical Colleges will convene at Maple Hall, Grand Pacific Hotel, San Francisco, California, at 3 o'clock, P.M., Wednesday, June 6, 1894. Action will be taken at this meeting upon the following amendments, to-wit.:

Rush Medical College, by unanimous vote, submits the following amendment to Sec. V, Art. III, of the Constitution, "providing that students who intend to graduate in 1899, or in subsequent classes, four years of medical study and an attendance upon four annual courses of lectures of not less than six months duration each will be required. Provided, that graduates of literary colleges who have taken a course of scientific studies, graduates of schools of pharmacy that require three years study and adequate preliminary education, may be admitted to the second year's work or course of lectures in the college without examination."

The present wording of Sec. V, Art. III, is as follows: "Candidates for the degree of Doctor of Medicine shall have attended three courses of graded instruction of not less than six months' duration each, in separate years."

Subsequent to the above action by Rush Medical College, upon request of the Secretary, President N. S. Davis appointed the following named persons to act as an informal committee, to, in conjunction with such other colleges as could send delegates, hold a conference and prepare for submission a schedule of requirements adapted to a four years' course: E. L. Holmes, Chairman, Rush Medical College; Reginald H. Fitz, Harvard Medical College; Victor C. Vaughan, University of Michigan; Wm. Osler, Johns Hopkins University; Wm. E. Quine, College of Physicians and Surgeons, Chicago, Ill.; P. S. Conner, Medical College of Ohio; N. S. Davis, Jr., Chicago Medical College; Dudley S. Reynolds, Hospital College of Medicine; Perry H. Millard, University of Minnesota.

The meeting was held at Chicago, February 7, twenty colleges being represented. The representatives of the colleges present were unanimously of the opinion that the present requirements of the entrance examination were not sufficiently definite, and directed that the following amendment to Sec. I, Art. III, be submitted for consideration at the forthcoming session to be held June 6: "Colleges, members of this Association, shall require of all matriculates an examination as follows: 1, an English composition in the handwriting of the applicant, of not less than two hundred words, said composition to include construction, punctuation and spelling; 2, arithmetic—fundamental rules, common and decimal fractions and ratio and proportion; 3, algebra—through quadratics; 4. physics—elementary, Gage; 5, Latin—an amount equal to one year's study as indicated in Harkness' Latin Reader."

The present wording of Sec. 1, Art. III, is as follows:

ARTICLE III, SECTION 1. Members of this Association shall require of all matriculates an English composition in the handwriting of the applicant, of not less than two hundred words, an examination by a Committee of the Faculty, or other lawfully constituted Board of Examiners, in higher arithmetic, algebra, elementary physics and Latin prose.

As a result of prolonged discussion, and upon motion of Prof. Victor C. Vaughan, the committee, by vote recommended that Sec. V, Art. III, be amended to read as follows: "Colleges, members of this Association, shall require of all applicants for the degree of M.D., attendance upon three courses of lectures of not less than eight months each, or four courses of six months each, in separate years."

Upon motion the Chair appointed the following Committee to prepare a minimum of requirements suitable to a four years' course, with instruction to submit the same in time for action at the forthcoming session: P. S. Conner, Medical College of Ohio; Victor C. Vaughan, University of Michigan; Wm. E. Quine, College Physicians and Surgeons, Chicago; N. S. Davis, Jr., Chicago Medical College; C. B. Stemen, Fort Wayne Medical College, Ind.

The above Committee unanimously recommended that the Constitution be amended by the following addition: "Colleges, members of this Association, shall require at least an amount of work in each branch as follows, to-wit.:

	Hours didactic and recitation.	Hours Laboratory
History and Embryology	50	100
Anatomy and Physiological Chemisty	150	300
Physiology	200	75
Chemistry	125	125
Materia Medica and Therapeutics	125	
Practice	200	
Surgery	200	
Regional and Operative Surgery	50	50
Obstetrics and Gynecology	150	
Ophthalmology and Otology	25	
Mental and Nervous	25	
Dermatology	25	
Bacteriology	25	150
Pathology	50	100
Physical Diagnosis	75	
Paedology	25	
Medical Jurisprudence	15	
Hygienic and State Medicine	50	
Genito-Urinary	25	
Orthopedics	25	
Laryngology	25	
Clinical Instruction		

N. S. DAVIS, M.D., L.L.D., President.
PERRY H. MILLARD, Secretary.

MISCELLANY.

Personal Notes.

DR. JOSEPH A. WHITE of Richmond, Va., was seriously injured while riding in a fox hunt, March 6.

DR. VOGAN was appointed Health Officer of Lowellville, Ohio, March 12.

DRS. FORMENTO and Harnan have been reëlected to the Louisiana Board of Health.

DR. B. C. BRETT, the President of the Wisconsin State Medical Society, has received from the Honorable the Secretary of the Treasury, a formal request for his resignation as Acting Assistant Surgeon of the Marine Hospital Service and in response has addressed the following letter:

"Your letter of February 27, asking my resignation as Acting Assistant Surgeon of the Marine Hospital Service, is received. Regarding this request as the equivalent of an order from my superior officer, I herewith respectfully comply with it."

Dr. A. W. Slaughter has been appointed to succeed Dr. Brett in the position noted.

Medical College Notes.

THE ST. LOUIS MEDICAL COLLEGE held its commencement exercises March 16, and conferred the degree of M.D., on sixteen graduates.

THE MISSOURI DENTAL COLLEGE at its commencement March 16, conferred the degree of D.D.S. on twenty-one graduates.

THE BEAUMONT MEDICAL COLLEGE of St. Louis, at its seventh annual commencement March 15, awarded diplomas to thirteen graduates.

THE TOLEDO MEDICAL COLLEGE held its thirteenth annual

commencement March 12. There were nine graduates. This college will hereafter have a four years' course.

The Ohio Medical College at Columbus held its second annual commencement March 13, and conferred the degree of M.D., on twelve graduates; there were also five graduates in pharmacy.

Hospital Notes.

New Hospital.—A new hospital is to be built at Columbia, Pa.

Nashville, Tenn.—The report of Dr. Charles Brower shows that 1,117 patients were treated in the city hospital during the past year.

Isolation Hospital.—Fond du Lac, Wis., stimulated by the appearance of smallpox in some Wisconsin towns will build an isolation hospital.

Selected a Site.—The trustees of the Reuben Noble Hospital Fund at Westfield, Mass., have selected a site for that institution, which will cost $20,000.

Differences.—There is an interesting row between the regular, "homeopathic" and "eclectic" staff at the Cook County, Ill., Hospital.

St. Boniface Hospital, Winnipeg, has been entirely reconstructed, and is now one of the best arranged Hospitals in the Dominion.

North Carolina State Hospital for the Insane.—The quarterly meeting of the North Carolina State Hospital at Morganton, was held March 1. The Hospital is overcrowded and needs enlargement.

Contagious Disease Hospitals.—The Health Board of Detroit are unanimous in recommending the establishment of a contagious disease hospital. A pest house is to be built at Columbus, Ohio, on the county infirmary grounds.

Hospital for Insane, Rochester, Minn.—Work on the rebuilding of the administration building at the State Hospital at Rochester, Minn., will begin shortly. It is to be a $60,000 improvement and will greatly improve the appearance of the building.

The Officers and Managers of the Infants' Summer Hospital, Rochester, N. Y., held their annual meeting March 12. The debt of the lakeside institution has been reduced to $1,500. The Hospital will be opened to patients at the usual time this summer. Among the officers were Dr. Edward M. Moore, Sr. and Dr. E. M. Moore, Jr.

The Flagler Hospital at Lockport, N. Y., has been made a general and emergency city hospital, the management being in the hands of a non-sectarian board of managers of twenty-one members, on which shall be represented the Mayor, the Board of Health and each of the religious denominations of the city.

The "Big Four" Will Have Nine Hospitals.—The "Big Four" Railroad has finally decided to establish hospitals at Indianapolis, St. Louis, Cairo, Kankakee, Peoria, Sandusky, Cleveland, Columbus and Cincinnati, at a total cost of $100,000. A hospital tax of 50 cents a month will be assessed on all employes receiving a monthly salary of more than $50.

The Medical Society Select the Staff.—The Macon (Georgia) Hospital has been established, and the Macon Medical Society are to furnish the medical service of the Hospital. It is a great pity that the medical staff of municipal hospitals generally are not thus selected. The societies may well be trusted to recommend efficient and capable men.

Municipal Hospital, Philadelphia.—A movement to remove the Hospital to Petty's Island is doomed to failure, owing to the difficulty of reaching the Island in winter. The Councilmen selected from the Twenty-eighth Ward where the Hospital is at present located were pledged to work for its removal, but the other councilmen object to its removal to the vicinity of their respective constituents, and so the Hospital is likely to remain where it is.

New Hospital at Baltimore.—The Faculty of Baltimore Medical College will build a new hospital this summer on the site of the Maryland General Hospital, which is to be torn down. The hospital will have a capacity of 150 beds and 20 private rooms and it is designed to be completed in December. The committee in charge of the new building are Drs. R. H. P. Ellis, R. W. Johnson, J. D. Blake and Wilmer Brinton. The physicians and surgeons composing the hospital staff are Drs. C. G. Hill, R. H. P. Ellis, David Streett, Wilmer Brinton S. K. Merrick, John D. Blake, A. C. Pole, George Reuling, R. W. Johnson, T. A. Ashby, W. T. Howard, Jr., S. T. Earle and R. B. Warfield.

Milwaukee is to have a Children's Hospital. It will be opened May 1. The following will be the medical staff:

Attending Physicians—Dr. Bennett, Dr. R. C. Brown, Dr. H. V. Ogden and Dr. S. Friend.

Surgical Staff—Dr. Ralph W. Chandler, Dr. Bryant Smith, Dr. F. Rogers and Dr. Frank Munkwitz.

Attending Oculists—Dr. Edgar H. Neyman and Dr. H. V. Würdemann.

Consulting Staff—Dr. William Fox, Dr. T. E. Wallbridge, Dr. Thomas Hay, Dr. Louis Frank (dermatologist), and Dr. Franklyn J. Tower (pathologist).

Miss Louise King, a graduate of the Illinois Training School for Nurses, will be the Superintendent of the Hospital.

Winnipeg General Hospital.—At a meeting held March 11, the attending medical staff of last year was re-appointed for the ensuing year, viz:

For the general wards—Doctors R. J. Blanchard, Jas. Patterson, J. R. Jones, H. H. Chown, H. A. Higginson and J. S. Gray.

For the isolated wards—Doctors W. J. Neilson and N. B. Gillies.

For the maternity wards—Doctors A. J. Mcdonnell and R. M. Simpson.

Specialist for diseases of the eye, ear and throat—Doctor J. W. Good.

A communication was received from the attending medical staff with reference to the terms and conditions on which patients should be received into the private wards of the Hospital. A committee of the Board was appointed to meet and confer with the medical staff in reference to this matter.

The First Hospital Car.—The Central Railroad of New Jersey has just fitted out and put into service the first hospital car in the history of railroading. It was turned out of the Ashley shops a few days and is now stationed at Mauch Chunk, Pa., ready for use. It is divided into two compartments, both of which are fitted up for hospital use. There are cots for the patients, seats, a good supply of medicines and lintels and other necessary articles for the care of the injured. The car is painted a light cream on the interior, and is made bright and cheerful. Maimed and injured patients can now be tenderly cared for, and rest as well as at home. The car was constructed at the suggestion of Mrs. Dr. Erwin of Mauch Chunk.

Kansas State Board of Health.—Dr. H. W. Roby of Topeka, (Homeop.) has been appointed a member of the Kansas State Board of Health to succeed Dr. J. P. Stewart.

Board of Health of Manitoba.—The following appointments have been made to constitute the Provincial Board of Health as re-organized at the last session of the House; James Patterson, M.D., Winnipeg; John Mackie, M.D., Portage la Prairie; Alex Flemming, M.D., Brandon; George Riddell, M.D., Crystal City; S. J. Thompson, V. S., provincial veterinarian. Dr. Patterson has been selected Chairman. The first four gentlemen are also the District Inspectors for the province. E. M. Wood has been appointed Secretary of the Board.

A Mexican Pest House.—Five American sailors have returned to this city, after an experience in a Mexican pest house that has convinced them, at least, that the Mexican quarantine officials have much to learn of sanitary regulations, as well as of the laws of humanity.

Isolated for eight days, deprived not only of liberty but of food, drink and medical attendance, to say nothing of comfort, it was fortunate that these mariners had no serious illness, otherwise the mistaken vigilance of the Mexican health officials and the indifference of the steamship company's agents might have been responsible for their deaths from exposure. The steamship *Vigilancia*, of the New York and Cuba Mail Steamship Company, more generally known as the Ward line, on February 3 last left her pier at the foot of Wall Street bound for Vera Cruz, Mexico. The *Vigilancia* had formerly been in the Rio trade, and this was her first voyage to the Mexican ports.

Shortly after the *Vigilancia* sailed, some sort of skin disease broke out among the crew and became general. It was merely an annoying rash, and is attributed to the bad condition of the bedding. Among the crew of the steamer was Albert C. Barrett of 170 East Seventy-sixth Street, who was rated on the ship's books as electrician and ice engineer. He related his experience to a reporter as follows:

"Not one of the Ward line steamers," said Mr. Barrett, "carries a doctor. They only have medicine chests, and when any of the crew is sick one of the officers prepares a dose from the chest. When this skin disease broke out, there was no one to attend to the men. When we anchored at Progreso, Mexico, on the morning of February 10, about forty men were suffering slightly with this complaint, and when the Mexican quarantine officers boarded the *Vigilancia* they were greatly scared at the thought of smallpox. The ship was quarantined for twenty-four hours, and the captain was very anxious to get away. It was finally arranged to send ashore five men as sick, and then give the ship a clean bill of health. Men were selected who could best be spared. I was one, and the others were E. T. Stilling, William Hamm, R. Caccia, cadets, and Patrick Coyle, oiler.

"We were landed on the beach over a mile from the city, and escorted to an old, tumble-down, adobe hut, with a leaky and dilapidated roof, and without doors. Here we were met by an individual who informed us in broken English that he was the Chief of Police, and that we were not to be allowed to leave the hut under any circumstances. He then left us in charge of two policemen, armed with sabres and revolvers.

"For twenty-six hours we remained in this hovel without food or water or bedding of any kind, and our repeated requests to be allowed to go to the city to see the United States Consul were refused by the guards. On the second night Coyle and myself stole away and reached Progreso without detection, and sought Mr. John Waddle, the acting United States Consular Agent. Mr. Waddle is the English Consul also, and befriended us in every way possible. He told us he could not visit our quarters without the consent of the Mexican authorities. He promised to attend to our case and we returned to the hut.

"We sent an appeal to the United States Consul and got a few things in return. We were kept in the pest-hole until February 18. Mr. Waddle saw that we were properly cared for, and February 28 we got away on our own ship, which had returned. But for the efforts of Mr. Davis and Mr. Waddle we might still be in that awful place."—*New York World.*

THE PUBLIC SERVICES.

Examinations U. S. Army Medical Corps.—In view of the possibility of the reduction of the Medical Corps of the Army from one hundred and twenty-five to ninety Assistant Surgeons, by action of Congress at its present session, and to save possible loss of time and expense to candidates if such action be taken, the examinations appointed for March and April, 1894, will, by order of the Secretary of War, not be held until further notice.

It is probable that if the Corps should not be reduced, the Examining Board will be convened in the fall of 1894. Of this, notice as early as possible will be given.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from March 18, 1894, to March 23, 1894.

Major HENRY M. CRONKHITE, Surgeon U. S. A., is relieved from duty at Ft. Clark, Texas, and ordered to report in person to the commanding officer, Ft. Reno, Oklahoma Ter., for duty at that post, relieving Capt. WILLIAM C. GORGAS, Asst. Surgeon. Capt. GORGAS, on being thus relieved, will report in person to the commanding officer, Ft. Barrancas, Fla., for duty at that post, relieving First Lieut. ROBERT S. WOODSON, Asst. Surgeon. First Lieut. ROBERT S. WOODSON, Asst. Surgeon, on being relieved by Capt. GORGAS, will report in person to the commanding officer, Ft. McIntosh, Texas, for duty at that post and for field duty in the Dept. of Texas, relieving First Lieut. BENJAMIN L. TEN EYCK, Asst. Surgeon. Lieut. TEN EYCK, on being thus relieved, will report to the commanding officer, Ft. Clark, Texas, for temporary duty at that post.

First Lieut. HARLAN E. MCVAY, Asst. Surgeon, so much of par. 18, S. O. 60, from A. G. O., March 12, 1894, as relates to him, is amended to direct him, on being relieved from duty at San Carlos, Ariz., by First Lieut. STRAUB, Asst. Surgeon, to report in person to the commanding officer, F. Huachuca, instead of Whipple Bks., Ariz.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending March 24, 1894.

Surgeon B. S. MACKIE, ordered to the U. S. R. S. "Franklin."

P. A. Surgeon W. C. BRAISTED, from Naval Hospital, New York, and to the U. S. S. "Columbia."

P. A. Surgeon S. G. EVANS, from the Naval Hospital, Philadelphia, and to the Naval Hospital, New York.

Surgeon W. G. FARWELL, ordered to the U. S. S. "Columbia."

Marine Hospital Changes. Official list of changes of stations and duties of medical officers of the U. S. Marine Hospital Service, for the four weeks ended March 17, 1894.

Surgeon C. S. D. FESSENDEN, detailed as chairman of board for physical examination of Asst. Surgeon L. E. COFER, March 6, 1894.

Surgeon GEORGE PURVIANCE, detailed as chairman of board to inspect Reedy Island Quarantine, Feb. 20, 1894. To report at Bureau for temporary duty, March 2, 1894.

Surgeon W. H. H. HUTTON, detailed as chairman of board for physical examination of Inspector of Hulls, March 9, 1894.

Surgeon J. MCKAY, detailed as recorder of board for physical examination of Asst. Surgeon L. E. COFER, March 6, 1894.

Surgeon JOHN GODFREY, detailed as chairman of board for physical examination of canoidate, Revenue Marine Service, March 6, 1894.

Surgeon FAIRFAX IRWIN, to proceed to Paris, France, for special duty, Feb. 24, 1894.

Surgeon F. H. MEAD, detailed as chairman of board for physical examination of candidates, Revenue Marine Service, March 10, 1894.

Surgeon H. R. CARTER, to report at Bureau for special duty, March 14, 1894.

P. A. Surgeon C. E. BANKS, to proceed to Portsmouth, N. H., as Inspector, March 12, 1894.

P. A. Surgeon P. C. KALLOCH, granted leave of absence for thirty days, March 12, 1894.

P. A. Surgeon A. H. GLENNAN, detailed as member of board to inspect Reedy Island Quarantine, Feb. 20, 1894.

P. A. Surgeon EUGENE WASDIN, granted leave of absence for sixteen days, March 3, 1894.

P. A. Surgeon J. J. KINYOUN, to report to chairman of Committee on Ventilation and Acoustics, House of Representatives, for special duty, Feb. 21, 1894.

P. A. Surgeon R. M. WOODWARD, to report at Bureau for special duty, March 14, 1894.

P. A. Surgeon G. M. GUITERAS, granted leave of absence for twenty days, Feb. 19, 1894.

Asst. Surgeon W. G. STIMPSON, granted leave of absence for twenty-five days, March 5, 1894. Detailed as recorder of board for physical examination of Inspector of Hulls, March 9, 1894.

Asst. Surgeon E. R. HOUGHTON, ordered to examination for promotion, March 3, 1894.

Asst. Surgeon M. J. ROSENAU, ordered to examination for promotion, March 6, 1894.

Asst. Surgeon L. E. COFER, to report to board for physical examination, March 6, 1894. Placed on waiting orders, March 15, 1894.

Asst. Surgeon C. H. GARDNER, detailed as recorder of board for physical examination of candidates, Revenue Marine Service, March 10, 1894.

Asst. Surgeon W. J. S. STEWART, detailed as recorder of board for physical examination of candidates, Revenue Marine Service, March 10, 1894.

LETTERS RECEIVED.

(A) Alden, C. H., (2) Washington, D. C.; Andrews, Edmund, Chicago, Ill.; Alley, E. H., Toledo, Ohio; American Physicians' Sanitarium Association, Washington, D. C.; Abbott & O'Brien Drs., St. Paul, Minn.; Arend, A., Chicago, Ill.

(B) Barrett, J. G., Foxville, N. C.; Badger Paper Co., Kaukauna, Wis.; Best, W. L., Quinerly, N. C.; Blake, W. C., Lyndon, Vt.; Ballenger, W. L., Evanston, Ill.

(C) Comegys, C. G., (2) Cincinnati, Ohio; Cochran, Jerome, Montgomery, Ala.; Coleman, P. C., Colorado, Texas; Clark, E. S., San Francisco, Cal.; Coughlin, Joseph, Syracuse, N. Y.; Cunningham, M. E., Garnett, Kansas; Cook, E. P., Mendota, Ill.

(D) Dougherty, G. F., Neoga, Ill.; Dickinson, G. K., Jersey City, N. J.; Dickert, Joseph, Newark, N. J.; Daly, W. H., Pittsburg, Pa. Dollber-Goodale & Co., Boston.

(F) Fitz, R. H., Boston, Mass.; Fehr, Julius, Hoboken, N. J.

(G) Guy, J. D., Coventry, N. Y.; Greene, Chas. L., St. Paul, Minn.; Gamble, W. E., Chicago, Ill.; Guilford, W. M., Lebanon, Pa.

(H) Ashenburg, Pa.; Harris, W. J., Washington, D. C.; Hummel, A. L., (4) Philadelphia, Pa.; Holton, Henry D., Brattleboro, Vt.; Howard Deane C., Fort Buford, North Dakota; Hawkins, A. S., Monett, Mo.; Hoar, Geo. F., Washington, D. C., Hess, John N., New Marion, Ohio.

(J) Jeffery, A. L., Denver, Colo.; Jones, Albert M., Redlands, Cal.;

(K) Kengla, L. A., San Francisco, Cal.

(L) Linger, O. E., Starbuck, Minn.; Listol Chemical Co., Chicago, Ill.; Leffingwell, Watkins, N. Y.; Linthicum, D. A., Helena, Ark.; Lichty, D., Rockford, Ill.

(M) Millard Perry H., (2) St. Paul, Minn.; Murnaw, H. A., Elkhart, Ind.; Metcalf, C. N., Indianapolis, Ind.; Medlin, P. A., St. Louis, Mo.; McArthur Hypophosphite Co., Ansonia, Conn.; McMurtry, L. S., Louisville, Ky.; Mattison, J. B., Brooklyn, N. Y.; McKeown, S. W., Youngstown, Ohio.

(N) Neimyer, W. G., Chicago, Ill.; Nutt, David, London, Eng.

(O) Osborn, W. W., Upper Middletown, Pa.

(P) Park, J. Walter, Harrisburg, Pa.

(R) Robbins, J., Quincy, Ill.

(S) Stearns, Frederick, Detroit, Mich.; Stutsman, Carl, Burlington, Iowa; Stoddard, G. W., Ramsey, Ill.; Smart, Chas., Washington, D. C.; Sonchon, Edmond, New Orleans, La.

(T) The Sentinel Co., (2) Milwaukee, Wis.; The Drevet Mn'fg Co., New York, N. Y.; The Maltine Manufacturing Co., New York, N. Y.; Throne, R. C., Nashville, Tenn.; Trimble, J. R., Baltimore, Md.

(W) Wilson, G. B., (2) Pullman, Wash.; Westermann, B. & Co., (2) New York, N. Y.; Willson, H. B. & Co., Washington, D. C.; Whalen, C. J., Chicago, Ill.